Investigating options for different compliance systems for PEF and OEF declarations

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List of abbreviations

AFNOR	Association Française de NORmalisation
ASI	Accreditation Services International
CFP	Carbon Footprint of Products
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoC	Chain of Custody
COFRAC	COmité FRançais d'ACcréditation (French accreditation body)
CSR	Corporate Social Responsibility
DAkks	Deutsche Akkreditierungsstelle GmbH (German accreditation body)
DEFRA	Department for Environment, Food and Rural Affairs (UK)
DG JRC-IES	Directorate-General–Joint Research Centre-Institute for Environment and Sustainability
DGCCRF	Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes (French general directorate for fair trading, consumer affairs and fraud control)
EEA	European Economic Area
EPA	Environmental Protection Agency
EPER	European Pollutant Emission Registry
ESL	European Social Label
EU ETS	European Union Emissions Trading System
EUTR	European Union Timber Regulation
FLEGT	Forest Law Enforcement Governance and Trade
FLO	Fairtrade Labelling Organizations
FSC	Forest Stewardship Council
GHG	Greenhouse Gas emissions
GOTS	Global Organic Textile Standard
IFOAM	International Federation of Organic Agriculture Movements
ILUC	Indirect Land Use Change
IOAS	International Organic Accreditation Service
IPCC	Integrated Pollution Prevention and Control
IWG	International Working Group on Global Organic Textile
JEMAI	Japan Environmental Management Association for Industry
KEITI	Korea Environmental Industry and Technology Institute

KIEST	Korean Institute of Environmental Science and Technology
KOECO	Korea Eco-Products Institute
LCA	Life Cycle Assessment
LCIE	Laboratoire Central des Industries Electriques
MS	European Union Member States
MSC	Marine Stewardship Council
NANDO	New Approach Notified and Designated Organisations
NGER	National Greenhouse and Energy Reporting (Australia)
NGO	Non-Governmental Organisation
OEF	Organisation Environmental Footprint
OEFSR	Organisation Environmental Footprint Sector Rules
PAS	Publicly Available Specification
PCR	Product Category Rules
PEF	Product Environmental Footprint
PEFCR	Product Environmental Footprint Category Rules
RED	Renewable Energy Directive
RSPO	Roundtable on Sustainable Palm Oil
TBT	Technical Barriers to Trade
TMG	Tokyo Metropolitan Government
UBA	Umweltbundesamt (German Federal Environment Agency)
UKAS	United Kingdom Accreditation Service
WBCSD	World Business Council for Sustainable Development
WRI	World Resource Institute
ZLS	Zentralstelle der Länder für Sicherheitstechnik (Central office of Länder for the engineering of safety)

Executive summary

Context and objectives

- **The development of EU methodologies for PEF and OEF and the EU "Single Market for Green Products Initiative"**

Since 2011, the European Commission has worked towards the development of a harmonised methodology for the calculation of the environmental footprint of products (PEF) and organisations (OEF). Building on a number of existing standards and guidance documents, technical guidelines have been developed. These guidelines provide requirements on how to calculate a PEF or an OEF, as well as on how to create product or sector-specific methodological rules called Product Environmental Footprint Category Rules (PEFCRs) or Organisation Environmental Footprint Sector Rules (OEFSRs) to be used for comparisons between products or between organisations.

In April 2013, the Commission adopted the communication "Building the Single Market for Green Products". The communication guides EC's activities in the field of environmental impact of products and organisations for the coming years and confirmed that the work on PEF and OEF methodologies would be pursued with a three-year testing period aiming at developing product- and sector-specific rules. The communication also recommends the use of PEF and OEF to measure and communicate the life cycle environmental performance of products and organisations for Member States, companies, private organisations and the financial community.

- **Importance and challenges of compliance systems for PEF and OEF declarations**

Economic actors tend to distrust environmental claims. There is a general perception among consumers that companies are competing on their claims rather than on making true efforts on environment issues. This might result in consumers or public administrations not buying green products or not considering environmental risks adequately.

In order to ensure that information on the environmental performance of products and organisations is reliable, there is a need to verify such information. However, a key specificity of PEF/OEF declarations is that they are partly based on impacts that cannot be directly measured on the product (e.g. the energy consumed during manufacturing of a product) or on the organisation sites (e.g. indirect GHG emissions). Consequently, the validity of a declaration cannot be entirely guaranteed with tests on the products or on-site inspections.

- **Identifying appropriate compliance systems applicable to PEF/OEF declarations**

In this context, this study aims at identifying and describing the most appropriate options for compliance systems applicable to PEF/OEF declarations. The specific objectives are the following:

  - Review and describe existing compliance systems applied to mandatory or voluntary schemes for products or organisations;
  - Analyse the international trade rules and their relevance for PEF/OEF compliance systems;

- Define and characterise various options for operational verification activities as well as broader policy orientations to be applied in the context of future PEF/OEF compliance system;
- Identify and describe the key factors that could influence the reliability and the cost of the future PEF/OEF compliance system;
- Provide recommendations on the most suitable option(s) for PEF/OEF declarations.

Findings of the review of existing schemes

A diversity in existing schemes, which in turn favours a diversity of compliance systems

In a first step, 27 schemes were reviewed, including schemes that primarily address the environmental performance of products or organisations (and from that perspective, share common objectives with PEF/OEF) as well as schemes that address issues such as economic/social sustainability criteria or quality/safety aspects (i.e. not directly related to PEF/OEF). These latter schemes were considered relevant since they are mostly well-established, long-running compliance systems that cover a wide range of product categories. Among the initial list of 27 schemes a wide diversity was observed in terms of:

- Scope – Product-or organisation-oriented scheme
- Topics – Environment, social, quality, safety, etc.;
- Regulatory framework – Voluntary initiative, mandatory policy;
- Scheme owners – Private or public schemes;
- Geographical coverage – National, EU, international.

In a second step, the specific features of the compliance systems for 14 selected schemes were studied focusing on: 1/ the design and rules governing their compliance systems, and 2/ the concrete implementation of the compliance system. The cross-analysis shown a wide variety of technical features, as described in the following table.

How are the rules of the scheme structured?					
Requirements for operators: *Set of rules that may be applied to product and organisations*	**Standalone document** GOTS: single standard document Label LUCIE: single evaluation framework	**General Principles and national versions** FSC and RSPO "Principles and Criteria" completed with national standards	**Generic standards and product standards** FLO International generic standards an d additional standards applying to particular producer types	**No generic standard, product-specific requirements only** Blue Angel or Green Seal: no generic overarching requirements. Requirements classified by product categories	**Requirements written in law** For mandatory schemes, such as the EUTR
Guidance for operators *Non-normative documents in addition to requirements*	**Additional guidance provided by the scheme owner** In voluntary schemes such as FSC, MSC, RSPO or Fairtrade In mandatory contexts – see for instance EC guidance document for EUTR			**Certifiers explain to operators how they work and how they will assess compliance with the standards.** FLO-CERT for instance, makes publicly available its "Compliance Criteria" (which are established to translate requirements into verifiable control points)	
Guidance and requirements for verifiers	**Requirements and/or guidance can be developed for third-party verifiers**. Requirements for certifications bodies available in e.g. MSC, FSC and GOTS schemes In some cases, such procedures are intentionally not made publicly available (e.g. NF and GS mark)				
Stakeholders involved in the development of the requirements	**Any actor interested in entering the scheme can propose requirements** In Blue Angel and NF schemes, any actor can propose a new set of requirements for a product category that does not exist yet.	**Procedures for standards development and revision** In a number of international schemes (e.g. FSC, MSC, RSPO, GOTS) procedures are based on identification and consultation of affected stakeholders as well as possible public consultations		**Voluntary schemes recognized by institutions** Case of the RED: This scheme establishes EU sustainability criteria for biofuels. To prove compliance with the criteria, stakeholders of the biofuel sector can develop voluntary "sustainability schemes" that can be recognised by the EC.	
How are verification activities carried out?					
Parties involved in verification	**First-party verification**	**Third-party verification**			
	First-party verification possible, under certain conditions e.g. Japan Ecoleaf, CE marking system, GHG Protocol Standard for products)	**The owner of the scheme is the certifier** e.g. Green Seal Type I Ecolabel, European Social Label	**The owner of the scheme created a separate entity for certification** e.g. Carbon Trust with Carbon Trust Certification Limited, Fairtrade scheme with FLO and FLO-CERT	**Verification activities carried out by an independent registered certification body** In FSC, MSC and RSPO schemes, only independent certification bodies accredited by the ASI	
Scope of the assessment	**Focus on the product itself and its measurable technical characteristics** Schemes tackling issues related to quality or safety (e.g. CE marking, NF, GS mark) tend to focus on these aspects. In such schemes, production processes can also be verified as well as quality management systems within the organisation.			**Verification of characteristics that are mostly invisible in the final product** In schemes related to sustainability issues, verification activities have to cover the entire value chain including the producers and the traders.	
Balance between ex-ante and ex-post verification activities *Verification before or after placing the product on the market*	**Thorough initial conformity check but no follow-up** e.g. Japanese ISO Type III environmental label Ecoleaf	**No prior third-party verification required before declaration of compliance but checks in case of suspicion** e.g. Australian NGER scheme post-reporting audits maybe initiated for any reason (but in particular, when the authorities have a suspicion of non-compliance).		**Certification cycles** e.g. FSC, MSC, RSPO, Fairtrade, Label LUCIE, NF. The cycle begins with initial verification activities then surveillance activities are performed on a regular basis (common frequencies are every year or every two years) and finally, a renewal procedure is launched.	
What is the governance of the compliance system?					
Governance *Who has authority and decision-making power?*	In EU policies such as EU organic farming label or EUTR, a competent authority implements its own compliance system in each Member State. The final decision on the compliance or non-compliance of an operator is made at the national level. In international voluntary schemes such as FSC and MSC, an important emphasis is made on the governance structure. It is essential for the credibility and transparency of such schemes that the power remains balanced between sectors, regions, and private and public interests. Only certifications bodies can assess compliance and decide whether a certificate can be awarded. The certification activity market is open to any certification body as long as it is accredited. Other schemes, such as the Blue Angel or Fairtrade schemes, also have a multi-stakeholder approach in their governance but only with one body performing certification activities (RAL and FLO-CERT, respectively).				

Several factors play a role on a compliance system's reliability

Factors that play a role on a compliance system's reliability are described below. It must be underlined that a single factor on its own cannot make a scheme reliable or unreliable. Instead, a given factor plays a role in the overall reliability, while interacting, influencing and being influenced by other factors.

Name	Higher reliability	Lower reliability
Initial conformity assessment	The initial assessment includes documentary check, testing when relevant, audit, interviews, etc. The initial assessment also applies to the supply chain.	The initial assessment is only based on documentation / There is no initial assessment.
Surveillance	Surveillance is undertaken every year with a complete analysis (similar to initial assessment).	There are surveillance activities only in case of suspicion / There is no surveillance activity.
Intervention of a verifier	External and accredited verifier required.	Internal verifier required / No requirement for a systematic intervention of a verifier.
Validity of the proof of compliance	The proof of compliance is valid for a limited and short time (e.g. one year).	The proof of compliance is valid until a case of non-compliance is identified.
Flexibility	The standards are adapted to the type of products, the type of operators using the scheme (small producers, traders, etc.), the operators have a period to remedy instances of non-compliance. The verification procedure and its costs are adapted to the type of operators and their means (in terms of human or economic resources).	The standards, the cost, the verification procedure, the consequences in case of non-compliance are similar for every operator.
Transparency	The standards, the verification guide and requirements, information on complaints and their resolution, the costs, the cases of misuse are available and highly transparent.	The documentation is not publicly available.
Traceability	There is a considerable effort regarding traceability, records are kept for a defined time (more than 5 years), a control system for the verification of compliance and traceability is implemented along the supply chain.	The management of traceability is insufficient with for instance little or no record-keeping requirements.
Management of invisible characteristics	There is an in-depth verification of embedded/invisible impacts: the verification includes on-site inspection of supplier sites and interviews of stakeholders.	The operator only has to provide an attestation.
Consequences of non-compliance and misuse	Misuse can lead to sanctions such as fines or prosecutions. The operator has to correct the non-compliance in a determined time frame.	There is no consequence.
Governance	The scheme is developed and implemented by a multi-stakeholder organisation with various interests represented (e.g. NGOs, companies, associations, etc.).	The scheme is overseen by an organisation close to private interests, with no public consultation; or by a group of two companies; or each MS establishes its own verification process; or a company can create the standards for its sector. The scheme is developed and managed by a private company with only corporate stakeholders.
Recognition	The label is internationally known and recognised to be reliable and credible.	The label is not known. The label is known but its credibility is highly questioned.

High certification success rates are commonly observed

This can be explained by the attitude adopted by the scheme owners and verifiers towards operators: verification controls can be performed in the spirit of learning and continuous improvement, aiming at improving operator practices and giving time to take into account observations made by verifiers.

Although observed success rates are high, most of the operators undergoing a certification process have to provide corrective measures. The share between minor and major corrective measures varies according the schemes.

De-certification due to a complaint remains rare.

Complaints procedures initiated by third-parties appear to have relatively limited overall impact on de-certification but they are essential for the scheme's credibility and transparency.

Findings of the WTO rules analysis

- **WTO contains a number of disciplines that may be of relevance for an EU PEF/OEF scheme; which ones will, however, depend on the binding/non-binding nature of such schemes**

The most important rules are contained in the TBT Agreement and the GATT. In light of recent WTO case law, regulatory measures that do not force economic operators to disclose and communicate a PEF-profile (i.e. the results of a PEF study) of their products, but only allow them to make certain claims related to their products' environmental footprint if they use the EU PEF scheme (including its compliance system), would have to be considered a technical regulation under the TBT Agreement.

- **WTO law is not addressed at private actors**

Any private scheme laying down requirements for products or organisation, but not linked to mandatory legal rules is not subject to any specific WTO obligations

This applies by extension to compliance systems that are part of such schemes.

- **For EU measures on OEF, WTO law will only become relevant to the extent that these schemes have a trade component**

Options for the operational verification of the PEF/OEF studies

- **Three levers for providing reassurance**

The examination of the control points related to PEF/OEF requirements as well as the analysis of the illustrative verification activities based on existing PCRs revealed that there are three major levers to provide reassurance in the results of a PEF/OEF study, namely verification of the methodology, of the input data, and of the LCA calculations. However, none of these levers is sufficient in itself to give confidence in the results of a PEF or OEF study.

Therefore, the key principle that drove the development of the options is that the best approach shall be a balanced mix of activities related to each lever: 1/ LCA rules and underlying assumptions 2/ the data reliability and traceability, and 3/ how these two aspects are transcribed in terms of calculations in the LCA tool.

- **Three options referring to three "level of verification"**

Proposed options were derived from the concept of "limited assurance" and "reasonable assurance". The concept is also increasingly used for non-financial verification, as for instance in CSR report auditing. Through each level of verification, a certain level of confidence in the results is sought. The more intense the verification, the higher the level of confidence should be at the end of the verification process.

Level of verification	Lever	Description
Level 1 *(very) limited assurance*	**Methodology**	▪ Verification of the PEF report compliance with major (i.e. basic*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 20-30% of the specific activity data (based only on documentary checks of activity data).
	LCA calculations	▪ Verification of tool settings.

Level of verification	Lever	Description
Level 2 *Limited assurance* Level 1 verification and:	**Methodology**	▪ Review of the PEF report compliance with additional (i.e. intermediate*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 20-30% of the specific activity data (based on advanced documentary checks, and if necessary other types of verification activities). ▪ Verification of the reliability and traceability of 20-30% of the generic data (based on documentary checks).
	LCA calculations	▪ Verification of tool modelling for the basic PEF/PEFCR methodological requirements in the LCA tool. ▪ Verification of proper implementation of 20-30% of the specific activity data and corresponding calculations in the LCA tool.
Level 3 *Reasonable assurance* Level 2 verification and:	**Methodology**	▪ Review of the PEF report compliance with additional (i.e. advanced*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 60-80% of the specific activity data (based on advanced documentary checks; and if necessary audits, review of data collection procedures, etc.). ▪ Verification of the reliability and traceability of 60-80% of the generic data (based on documentary checks).
	LCA calculations	▪ Verification of proper implementation of the intermediate PEF/PEFCR methodological requirements in the LCA tool. ▪ Verification of proper implementation of the 60-80% specific activity data and corresponding calculations in the LCA tool.

Recommendations

Best practices

Terminology

- Use and refer to ISO standards and CE regulations definitions.

Design and structure of the requirements of the scheme

- Develop generic standards and product/sector standards.
- Develop additional guidance for operators.
- Develop guidance and requirements for verifiers (e.g. documents clarifying control points).
- Involve all interested parties in the development of requirements.

Verifications activities

- Adjust the "intensity" of verification performed depending on:
  - the level of risk associated with non-compliance, (similar approach as, for instance, in quality/safety schemes);
  - the level of reassurance being sought to ensure the overall credibility of the scheme, for instance in sustainability-related voluntary schemes;
  - the existing constraints in terms of costs, resources, available techniques, etc.

- Prefer third-party verification whenever required (i.e. linked with the required intensity of verification).

Governance of the compliance system

- Governance of the scheme must favour multi-party involvement (important for scheme acceptability, credibility and recognition).

- **Recommendation for operational verification activity in the context of testing verification processes (pilots)**

The best option would be "level 2 Limited assurance". It can be seen as an achievable first step with a proper balance between cost/simplicity/stakes/reliability.

- **Recommendation for the global design of the future PEF/OEF compliance system**

Given the diversity of products and sectors to be covered by PEF/OEF compliance system, it is recommended to develop a "meta compliance system" that can accommodate various systems and in particular the three following possible directions:

- Strengthening existing system for PEF/OEF

  This position can be seen as a business as usual scenario with a number of top-priority improvements actions, most notably systematic third-party verification and EU-defined operational verification procedures/rules.

- Limited involvement of public authorities

  This proposition is partly inspired by the Australian NGER scheme as regards to the strong balance towards surveillance activities, and by the EU Renewable Energy Directive as regards the rules developed by industry. In this proposition, the involvement of public authorities remains limited with the view of limiting costs borne by public authorities. Public authorities focus on surveillance and operators themselves define the operational rules.

- Certification cycles

  This proposition is inspired from schemes using a certification cycle (Fairtrade, FSC, etc.). The compliance system is based on certification cycles with initial certification and surveillance through monitoring and renewal activities.

  A possible option for companies performing PEF (respectively OEF) studies on a regular basis and consequently producing numerous PEF profiles the compliance system could include the possibility for the company carrying out the PEF study to perform the verification procedure itself, with the intervention of an internal verifier.

The directions/systems to be selected should depend on the product categories/sectors and be based on a risk analysis. According to the level of risk associated with non-compliance for a given product/sector, the compliance system used within the PEF/OEF scheme could differ in order to put more emphasis on the verification of products/sectors where a false declaration would have bigger (environmental) consequences.

Chapter 1. Introduction

This report contains six chapters:

- Chapter 1 is an introduction listing the key aspects of the context of the project as well as its objectives and the methodology employed;
- Chapter 2 provides definitions of relevant terminology and concepts used in this study;
- Chapter 3 presents the main outcomes of the initial review of existing schemes that were considered relevant for this study; and further focuses on the specific features of the compliance systems for a number of selected schemes.
- Chapter 4 addresses the issue of the applicable WTO rules for compliance systems;
- Chapter 5 suggests three options for operational verification activities as well as three possible directions for the future compliance system that could be applied to PEF and OEF declarations. This chapter also includes a discussion on key factors that could influence the cost of future PEF/OEF verification activities; and
- Chapter 6 provides key learnings and recommendations.

1.1 The general context for product and organisation environmental information

1.1.1 Development of EU methodologies for PEF and OEF

Policy Background

In December 2008, the European Council invited the European Commission to develop methodologies facilitating the establishment of carbon audits for organisations and carbon footprints for products[1].

In response to the Council conclusions, the European Commission performed studies on Product Carbon Footprint[2] and corporate GHG reporting[3] that involved analysing existing leading methodologies and initiatives, and how they might relate to future policies. It appeared that for some products and sectors, GHG emissions are not the most significant environmental aspect. In these areas, other environmental impacts of products and organisations should be taken into

[1] Council of the European Union, 2008. Sustainable Consumption and Production and Sustainable Industrial Policy Action Plan – Council conclusions, Brussels, 5 December 2008.

[2] European Commission – DG Environment, 2010. Product Carbon Footprinting – a study on methodologies and initiatives – Final report – July 2010.

[3] European Commission – DG Environment, 2010. Company GHG Emissions Reporting – a Study on Methods and Initiatives – Revised final report – October 2010.

consideration in order to reflect their environmental performance. Consequently, the Commission decided to extend the work towards other environmental aspects and initiated, via DG JRC-IES, the development of two harmonised European methodologies based on a life cycle assessment approach, namely the Product Environmental Footprint (PEF) and the Organisation Environmental Footprint (OEF).

In 2011, the publication of the "Roadmap to a Resource Efficient Europe"[4] has further strengthened and clarified the role of these environmental footprint methodologies – i.e. to provide a common methodological approach to enable Member States and the private sector to assess, display and benchmark the environmental performance of products, services, and companies.

In addition, in the context of the 2012 review of the Sustainable Consumption and Production Industrial Policy (SCP/SIP) Action Plan, the Commission conducted a study on different options for communicating environmental information for products[5]. This project investigated different design options for product-related environmental information displayed to consumers. Its overall objective was to examine different mechanisms and vehicles for communicating product-level environmental information to consumers in order to determine what mechanisms will maximise consumers' usage, understanding, and ability to compare between different substitutes.

First pilot on the methodology

In 2011, the EC via its JRC-IES produced two sets of draft guidelines as a basis for the future European methodology for PEF and OEF. Following the publication of these guidelines, the EC organised in 2011/2012 a testing phase of the product and corporate footprint methodologies involving in pilot studies a limited number of volunteering industries from various sectors[6] aiming to provide lessons and feedback about the implementability of the draft methodology (added value, implementation barriers, costs, accessibility to SMEs, data confidentiality issues, etc.).

After the testing phase, JRC-IES carried out an in-depth analysis of the findings of the pilot studies, which led to revised versions of the technical guidelines. These technical guidelines provide requirements on how to calculate a PEF or an OEF, as well as on how to create product or sector-specific methodological rules called Product Environmental Footprint Category Rules (PEFCRs) or Organisation Environmental Footprint Sector Rules (OEFSRs) to be used for comparisons between products or between organisations.

Single Market for Green Products Initiative

In 2012, the Commission carried out an impact assessment investigating various policy options for assessing the life-cycle environmental performance of products and organisations.

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[4] European Commission, 2011. Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions – Roadmap to a Resource Efficient Europe – Brussels, 20.9.2011 – COM(2011) 571 final.

[5] The study was performed by BIO in 2011 for DG ENV - BIO Intelligence Service (2012), Study on different options for communicating environmental information for products, Final report prepared for the European Commission – DG Environment. Available at:
http://ec.europa.eu/environment/eussd/pdf/footprint/ProductsCommunication_Final%20Report.pdf

[6] Food, feed and drinks, Retailers, Public Administrations, ICT, Water services, Energy production, Paper, Mining, Chemicals, Footwear, Televisions were the products/sectors for which the draft PEF/OEF methods have been tested.

Based on the conclusions of this impact assessment[7], in April 2013, the Commission adopted the communication "Building the Single Market for Green Products"[8]. This communication will guide EC's activities in the field of environmental impact of products and organisations for the coming years. In particular, this communication confirmed that the work on PEF and OEF methodologies would be pursued with a three-year testing period aiming at developing product- and sector-specific rules.

This new pilot goes further into the practical deployment of the methods. Indeed, its main objectives are to:

- Set up and validate the process of the development of PEFCRs and OEFSRs, including the development of environmental benchmarks[9] for each of them;
- Building on the outcomes of the present study, identify appropriate compliance systems for PEF and OEF, including ex-ante verification (i.e. before public release of the declaration) and ex-post verification (i.e. after public release of the declaration); and,
- Test, in collaboration with stakeholders, different approaches and channels for business-to-consumer and business-to-business communication.

The communication comes along with a recommendation[10] on the use of PEF and OEF as the common methods to measure and communicate the life cycle environmental performance of products and organisations for Member States, companies, private organisations and the financial community. Final guides of both methods are annexed to the Commission recommendation[11,12].

[7] Impact Assessment Accompanying the document Communication from the Commission to the European Parliament and the Council – Building the single market for green products: facilitating better information on the environmental performance of products and organisations. COM(2013) 196 final – SWD(2013) 112 final

[8] European Commission, 2013. Communication from the Commission to the European Parliament and the Council: Building the Single Market for Green Products – Facilitating better information on the environmental performance of products and organisations. Brussels, 9.4.2013 – COM(2013) 196 final. BIO and partners carried out an the assessment of this communication.

[9] Setting a benchmark involves the identification of the average model available in the market, and the definition classes of environmental performance based on this analysis.

[10] European Commission, 2013. Commission Recommendation of April 9 2013 on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations – Text with EEA relevance) – 2013/179/EU

[11] European Commission, 2013. Annex II: Product Environmental Footprint (PEF) guide to the Commission Recommendation on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations

[12] European Commission, 2013. Annex III: Organisation Environmental Footprint (OEF) guide to the Commission Recommendation on the use of common methods to measure and communicate the life cycle environmental performance of products and organisations

1.1.2 Compliance systems for PEF and OEF declarations

Importance of compliance systems

Economic actors tend to distrust environmental claims, both those attached to products and those included in companies' Corporate Social Responsibility or environmental reports. This situation could discourage organisations that are truly committed to improving their environmental performance. For instance, almost half of the European consumers do not trust the environmental performance information communicated on products[13]. Perception of green claims is deteriorating in the society, with a general feeling that companies are competing on their claims rather than on making true efforts on environment issues.

This might result in consumers or public administrations not buying green products and investors not freeing funds for environmental investments or not considering environmental risks adequately. Therefore, in order to ensure that information on the environmental performance of products and organisations is reliable (important for both consumers' confidence and for an "even playing field" for companies), there is a clear need to verify such information with appropriate tools. Two key aspects can be distinguished:

- Verification of the correctness of the methodology and data used (e.g. appropriate methodological choices for allocations, appropriate modelling, right use of specific and generic data); and,
- Verification of "traceability" to product/organisation (e.g. the product put on the EU market corresponds with the one described in the attached PEF declaration).

Main challenges

A key specificity of PEF/OEF declarations is that they are based on impacts that cannot be directly measured on the product (e.g. the energy consumed during manufacturing of a mobile phone) or on the organisation sites (e.g. Scope 3 emissions in the carbon footprint of organisations). Consequently, the validity of the declaration cannot be entirely guaranteed with tests on the products or on-site inspections.

In addition, other challenges are foreseen as regards verification activities and they should be taken into account when defining potential compliance systems/mechanisms, including:

- Costs to ensure compliance (for all interested parties: manufacturers, companies, public authorities, etc.);
- Data availability and complexity of the supply chain;
- Possibility of fraud and associated risks; and,
- Competencies of verifiers.

[13] European Commission, 2009. Flash Eurobarometer 256 on Europeans' attitude towards the issue of sustainable consumption and consumption – Analytical report

1.2 Objectives of the study

This study aims at identifying and describing the most appropriate options for compliance systems applicable to PEF/OEF declarations. The specific objectives are the following:

- Review and describe existing compliance systems applied to mandatory or voluntary schemes for products or organisations with a particular emphasis on systems which address the issue of embedded/indirect characteristics;
- Analyse the international trade rules and their relevance for PEF/OEF compliance systems;
- Define and characterise various options for operational verification activities as well as broader policy orientations to be applied in the context of future PEF/OEF compliance system;
- Building on the examples of existing schemes, identify and describe the key factors that could influence the reliability and the cost of the future PEF/OEF compliance system; and,
- Provide recommendations on the most suitable option(s) for PEF/OEF declarations.

1.3 Data collection

Based on a literature review, information for a selection of existing compliance systems/mechanisms at product and organisation levels, for voluntary or mandatory instruments covering embedded (for products) or indirect (for organisations) impacts was gathered. The review was summarized in two sets of factsheets – "descriptive factsheets" and "compliance system fact sheets" – that are provided in Annexe 2 and Annexe 3 respectively. The first set of factsheets presents the research findings of the initial review of schemes. The second set of factsheets concentrates on the compliance systems of selected schemes.

As a complement to the literature review, interviews were conducted in order to receive feedback on existing compliance systems as well as views on what type of verification activities would be suitable in the future for PEF and OEF declarations. The list of stakeholders involved in the study is presented in Annex 1. Fifteen different organisations and more than 20 individuals have been involved. Stakeholders from the following categories were targeted:

- Owners of schemes (e.g. FSC, Carbon Trust)
- Stakeholders involved in the definition, development or running of compliance systems (AFNOR Certification, Quebec ministry of Finance and Economy);
- Operators are businesses, individuals or other entities that could use a scheme (on a voluntary or mandatory basis) and are subjected to the compliance systems (e.g. Danone, InVivo);
- Companies or organisations carrying out verification activities (e.g. Deloitte, RAL gGmbH)
- Entities involved market surveillance (e.g. DGCCRF).

Chapter 2. Terminology and standards

Although they may seem relatively common, certain terms used in this report have a specific meaning within the context of environmental footprinting, PEF/OEF methodologies, or conformity assessment. In addition, some key concepts, such as "scheme" or "compliance system" require to be defined accurately in order to clarify the scope of the study.

2.1 Basic terms

It must be noted that for the purposes of this study, it is necessary to clarify the meaning of the following terms.

PEF- or OEF-Profile

The following definitions are taken from the guidance documents on the pilot phase[14,15].

A "PEF-Profile" is the result of a PEF study carried out in compliance with the PEF Guide or, where existing, with a specific PEFCR.

An "OEF-Profile" is the result of an OEF study carried out in compliance with the OEF Guide or, where existing, with a specific OEFSR.

PEF or OEF application

As mentioned in the guides[11,12], PEF or OEF studies may be used for a variety of purposes either in-house or targeted at external parties:

- In-house applications for both PEF and OEF may include support to environmental management; identification of environmental hotspots; and environmental performance improvement and tracking; and may implicitly include cost-saving opportunities.
- External applications for PEF relate to Business-to-Business (B2B) or Business-to-Consumer (B2C) communication. It may include responding to customer and consumer demands, marketing, benchmarking[16], environmental labelling, supporting eco-design throughout supply chains, green procurement and responding to the requirements of environmental policies at European or Member State levels.

[14] European Commission, 2013. Guidance for the implementation of the EU Product Environmental Footprint (PEF) during the Environmental Footprint (EF) pilot phase

[15] European Commission, 2013. Guidance for the implementation of the EU Organisation Environmental Footprint (OEF) during the Environmental Footprint (EF) Pilot Phase

[16] For PEF, benchmarking could for example include defining an average performing product (based on data provided by stakeholders or on generic data or approximations) followed by a grading of other products according to their performance versus the benchmark.

- External applications for OEF relate to stakeholders or Business-to-Business (B2B) communication as well as relationships with public authorities or investors. It may include responding to investors' information requests, marketing, benchmarking, and responding to requirements posed in environmental policies at European level or at the level of the individual Member States.

Disclosure and communication of a PEF or OEF study

The results of PEF study can be communicated in different forms that will depend on the intended application. As mentioned in the guidance documents for the implementation of the upcoming pilot phase[17,18], to date the possible communication vehicles envisaged are:

- For PEF:
  - PEF external communication report;
  - PEF performance tracking report;
  - PEF declaration;
  - PEF label.
- For OEF:
  - OEF external communication report;
  - OEF performance tracking report.

In the present study, the wording "declaration" is to be understood in a broad sense – i.e. encompassing all of the above-mentioned forms – as a claim on the environmental performance of a product or organisation made in the context of any of external applications. This claim may include a comparative assertion[19]. Note that in the case of PEF, Type III environmental declarations as defined in ISO 14025[20] may be a potential external application of a PEF study.

Scheme

In the present study, a scheme refers to a policy, initiative, or methodology laying down a set of rules that may be applied to products or organisations to address any issue considered relevant (e.g. sustainability or quality/safety issues). A scheme can be voluntary or mandatory, adopted by private

[17] European Commission – DG Environment, 2013. Guidance for the implementation of the EU Product Environmental Footprint (PEF) during the Environmental Footprint (EF) pilot phase – Version 3.0. Available at: http://ec.europa.eu/environment/eussd/smgp/pdf/Guidance_products_3.0.pdf

[18] European Commission – DG Environment, 2013. Guidance for the implementation of the EU Organisation Environmental Footprint (OEF) during the Environmental Footprint (EF) Pilot Phase – Version 2.0. Available at: http://ec.europa.eu/environment/eussd/smgp/pdf/Guidance_organisations_2.0.pdf

[19] A comparative assertion is an environmental claims regarding the superiority or equivalence of one product – resp. organisation – versus a competing product that performs the same function – resp. versus a competing organisation providing the same product (definition adapted from ISO 14040:2006 – Environmental management – Life cycle assessment – Principles and framework).

[20] "Type III environmental declarations" are quantitative, LCA-based claims of the environmental aspects of a certain good or service. See ISO 14025:2006 – Environmental labels and declarations – Type III environmental declarations – Principles and procedures

or public entities, and can include elements such as rules on substantive standards to be fulfilled, specific methodologies, conformity assessments, eligibility criteria to enter the scheme, governance of the scheme, etc.

More specifically in the field of quantification of environmental performance, a methodology is a means of calculating environmental indicators (e.g. GHG emissions for carbon footprinting). It provides guidance on calculation rules such as the boundaries of the system and the data to be used. For instance, the GHG Protocol standards[21,22] can be classified as a methodology. An initiative tends to relate more to the report format and contents and public disclosure. It can refer to a specific method. For instance, the work of the Carbon Trust in the field of product and organisation carbon footprinting can be seen as an initiative[23]. There can be overlap between these two notions.

Note that policies, initiatives and methods, may partially cover aspects related to quality-assurance and verification requirements. Examples of this are the GHG Protocol Standards or the PEF and OEF methodologies (see chapter 9 of PEF and OEF guides).

Product-oriented or organisation-oriented schemes

In product-oriented schemes, the final declaration relates to the product and maybe visible on it through a mark or a label. Rules of product-oriented schemes may focus on products characteristics or on various aspects of the value chain (e.g. production, processing, trade) and related traceability requirements or a combination of both aspects. Examples of product-oriented schemes are The Blue Angel, CE marking, GS mark, etc.

In organisation-oriented schemes, the declaration (if any) is borne by the organisation or a part of it. Rules of organisation-oriented schemes may focus on organisation characteristics or on various aspects of the value chain (e.g. the relationships with suppliers and customers) and related traceability requirements or a combination of both aspects. Examples of organisation-oriented schemes are the French and UK mandatory corporate carbon reporting, Label LUCIE and the Green Seal sustainability standard for product manufacturers.

Compliance system

A compliance system can be seen as a set of mechanisms aiming at providing confidence in a given scheme to users or other target individuals or organisations.

A compliance system is designed to verify that an "object" (i.e. product, service, or organisation) conforms to a specified set of rules or criteria, laid down in a standard or in a law. The compliance system helps to ensure that the object delivers on its promises. This involves carrying out verification activities based on specific methods, procedures, and tools in order to provide reassurance that the requirements are met.

[21] World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2004. GHG Protocol – A Corporate Accounting and Reporting Standard – Revised edition

[22] World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD),2011. GHG Protocol – Product Life Cycle Accounting and Reporting Standard

[23] DG Environment, 2010. Company GHG Emissions Reporting – a Study on Methods and Initiatives – Revised final report – October 2010.

Reliability of a compliance system

In the present study, the reliability of the compliance system is the level of confidence provided by the verification process, that is to say the confidence that the statement (conformity or non-conformity) made on the product/organisation is valid:

- Issue of a statement of conformity when fulfilment of requirements is demonstrated;
- Issue of a statement of non-conformity when non-fulfilment of requirements is demonstrated;

The reliability of the compliance system can be seen as the opposite of the concept of "verification risk" which is used for instance by the European Commission for the verification of emissions reports required under the Directive 2003/87/EC and defined as "the overall risk that the verifier issues an inappropriate verification opinion"[24].

Invisible or embedded/indirect characteristics

The expression "invisible characteristics" is used in this report to encompass both embedded and indirect characteristics.

Embedded characteristics relate to particular features of a product that needs to be verified against a specified rule (in the context of the applicable compliance system) but cannot be measured or tested on the product itself either because it is technically impossible or cannot be done at a reasonable cost. Here are several examples in various contexts:

- Environmental footprint of a product – Amount of GHG emissions related to the energy consumption of the production phase in the declared carbon footprint over the life cycle of the product.
- Fairtrade – A requirement for fair-trade products is that a fair price is guaranteed to producers.
- Ecolabel – Ecolabel standards may require that a specific share of the product composition come from post-consumer recovered material.

In the WTO terminology, such embedded characteristics are called "non-product-related processes and production methods" (NPR-PPMs – see section 4.2.4).

Embedded characteristics having a connection with environmental issues can be called embedded impacts.

Indirect characteristics relate to particular aspects deriving from the activities of an organisation that needs to be verified against a specified rule but cannot be physically seen or measured during visits in the organisation and can only be verified through documentation.

Here are several examples in various contexts:

- Environmental footprint of an organisation – Quantification of indirect GHG emissions related to the purchase of energy;

[24] European Commission, 2012. Guidance Document – The Accreditation and Verification Regulation – Verifier's risk analysis – AVR Key guidance note no. II.2, Version of 12 July 2012

- Corporate Social Responsibility – Insurance that suppliers of the organisation do not employ children; and
- Indirect characteristics having a connection with environmental issues can be called indirect impacts.

Traceability and Traceability to the product

ISO 9000[25] defines traceability as the "ability to trace the history, application or location of that which is under consideration [...] when considering a product, traceability can relate to:

- The origin of materials and parts;
- The processing history;
- The distribution and location of the product after delivery.

In the context of the present study "**traceability to the product**" relates to monitoring measures that aims at following a product (or its constituent elements) as it moves through successive stages of a supply chain in view of ensuring that the product was produced in compliance with the scheme requirements. This can be essential to maintaining consumer confidence, and therefore necessary to the success of a scheme.

For instance in the case of the Marine Stewardship Council (MSC) label, the compliance system should provide assurance to buyers that MSC-certified fish really comes from a MSC-certified fishery. In the case of PEF, it is essential that the product put on EU market really corresponds to the one described in the attached PEF declaration.

2.2 Key terminology used in the field of conformity assessment

Compliance of a product or organisation to specified requirements (described in e.g. international standards, technical regulations, and commercial specifications) can only be demonstrated with specific means. These means are provided through a **conformity assessment**. The concept of conformity assessment builds on specific terminology. Definitions presented in this section are based on ISO 17000 standard[26] and EU regulations Regulation EC 765/2008[27].

2.2.1 Conformity assessment

ISO 17000 specifically defines a conformity assessment as "a demonstration that specified requirements relating to a product, process, system, person or body are fulfilled". Regulation EC 765/2008 has a similar definition.

[25] ISO 9000:2005 – Quality management systems – Fundamentals and vocabulary

[26] ISO/IEC 17000:2004 – Conformity assessment – Vocabulary and general principles

[27] Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93

A notable characteristic of conformity assessments is that they can take on different forms, using different techniques undertaken by various entities according to the purposes for which they are being used.

As regards the ISO definition, it must be noted that a service is regarded as a particular form of product. In addition, "specified requirements" include those contained in suppliers' or purchasers' specifications, national, regional or international standards or governmental regulations.

Verification activities

There are various manners of demonstrating the conformity. Different verification activities can be undertaken to gather information regarding the fulfilment of the specified requirements by the object being subjected to the conformity assessment. Major types of verification activities include:

- Testing – i.e. determination of one or more characteristics of an object of conformity assessment, according to a procedure. This typically applies to materials, products or processes.
- Inspection – Examination of a product design, product, process or installation and determination of its conformity with specific requirements or, on the basis of professional judgement, with general requirements. Inspection of a process may include inspection of persons, facilities, technology and methodology.
- Audit – Systematic, independent, documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled.

Parties

Conformity assessments can be undertaken by many different individuals or organisations – i.e. "parties". Parties are categorised as follows:

- First party – the person or organisation that provides the object which is being assessed (e.g. supplier of a product or service).
- Second party – a person or organisation that has a user interest in the object (in general its purchaser, but also insurance companies or regulatory authorities).
- Third party – a person or body that is independent of the person or organisation that provides the object and of user interests in the object.

In the case of commercial transactions such as the supply of a product or service, the supplier is the first party, the purchaser is the second party and any other organisation which has no commercial interest in the transaction is a third party. Using the example of a product, roles and activities could be shared as follows (based on ISO report "Building trust"[28])

- The first party provides the product and is responsible for its conformity with the specified requirements. These requirements could be the first party's own specification, a specification provided by the purchaser or legal requirements relating to the product or any combination of the three. In any of these cases,

[28] ISO & UNIDO, 2010. Building trust – The Conformity Assessment Toolbox.

reference could be made to one or more national, regional or international standards;

- The second party specifies its requirements and is responsible for assuring itself that the product conforms to them; and,
- A third party could be requested by the first or second party to assess conformity of the product with the specified requirements and would be responsible for providing a statement of conformity (or non-conformity).

Attestation, certification, accreditation

An **attestation** is an issue of a statement, based on a decision following review, that the fulfilment of specified requirements has been demonstrated.

A **certification** is an attestation made by a **third party** such as a conformity assessment body.

An **accreditation** is a third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks.

Independence

ISO 17000 does not provide a "one-size-fits-all" definition of independence. Instead, this standard explains that the criteria for the independence of a body (e.g. inspection, certification or accreditation body) are provided in the standards applicable to their activities.

For instance, in the case of ISO 17020 (see section 2.3), three types of inspection bodies (Types A, B and C) are described depending on their different degree of independence:

- Type A bodies are third-parties independent of the parties involved in the design, manufacture, supply, installation, use or maintenance of inspected items
- Type B bodies are in-house inspection bodies forming a separate independent part of an organisation involved in the mentioned activities.
- Type C bodies must not be a separate part within the organisation but there must be a clear separation between inspection activities and other activities meaning that a person cannot inspect items designed, manufactured, maintained etc. by him.

Specific independence criteria to be met by each type of inspection body are described in Annex A of ISO 17020 and include, among others, the following:

- Type A – The inspection body shall be independent of the other parties involved.
- Type B – A clear separation of the responsibilities of the inspection personnel from those of the personnel employed in the other functions shall be established by organizational identification and the reporting methods of the inspection body within the parent organization.
- Type C – The inspection body shall provide safeguards within the organization to ensure adequate segregation of responsibilities and accountabilities in the provision of inspection services by organization and/or documented procedures.

2.2.2 Surveillance & Market surveillance

Conformity assessments can end when fulfilment of specified requirements has been demonstrated through attestation. When there is a need to provide **continuing assurance** of conformity, **surveillance** can be used.

ISO 17000 defines surveillance as a systematic iteration of conformity assessment activities to maintain the validity of the statement of conformity.

Market surveillance is a particular form of post attestation activity carried out by public authorities. In many countries, the regulatory authorities have a responsibility for protecting consumers and enforcing health and safety regulations by carrying out market surveillance. Economic constraints usually lead to a targeted surveillance, either concentrating on the highest areas of risk or responding to reports of non-conforming products.

Regulation EC 765/2008 defines the concept of **market surveillance** as "the activities carried out and measures taken by public authorities to ensure that products comply with the requirements set out in the relevant Community harmonisation legislation and do not endanger health, safety or any other aspect of public interest protection".

In the framework of Regulation EC 765/2008, Member States must guarantee effective surveillance of their market. They are required to organise and carry out close monitoring so concerned products meet the requirements for protection of public interests such as health or safety. This is done through competent market surveillance authorities in each Member State.

2.2.3 Ex-ante and ex-post verification activities

As regards product-oriented schemes, ex-ante and ex-post verification activities refer to activities carried before or after placing the product on the market, respectively. In Regulation EC 765/2008, "placing on the market" shall mean the first making available of a product on the Community market.

Typically, **market surveillance** is *ex-post* verification. On the in other hand, **initial conformity assessments** are carried out *before* placing the product on the market.

As regards the organisation-oriented schemes, the concept of ex-ante and ex-post verification activities could be applied to activities carried out before or after disclosure and communication of a statement related to a given scheme (reporting, organisation-level label, etc.).

2.3 Standards used in the field of conformity assessment

The general requirements for conformity assessment are laid down in the standards of the ISO/IEC 17000 series. Among these standards, this section presents for informative purposes the ones that could be of interest when developing a compliance system for PEF/OEF declarations.

ISO/IEC 17000:2004 – Conformity assessment – Vocabulary and general principles

This standard specifies general terms and definitions relating to conformity assessment, including the accreditation of conformity assessment bodies.

ISO/IEC 17011:2004 – Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies

This standard specifies general requirements for accreditation bodies assessing and accrediting conformity assessment bodies.

ISO/IEC 17020:2012 – Conformity assessment – Requirements for the operation of various types of bodies performing inspection

This standard specifies requirements for the competence of bodies performing inspection and for the impartiality and consistency of their inspection activities. It applies to inspection bodies of type A, B or C, as defined in ISO/IEC 17020:2012, and it applies to any stage of inspection.

ISO/IEC 17021:2011 – Conformity assessment – Requirements for bodies providing audit and certification of management systems

This standard is intended to certification bodies and is usually applicable in the context of organisation-oriented schemes. It contains principles and requirements for the competence, consistency and impartiality of the audit and certification of management systems of all types (e.g. quality management systems or environmental management systems) and for bodies providing these activities.

ISO/IEC 17065:2012 – Conformity assessment – Requirements for bodies certifying products, processes and services

This standard is intended to certification bodies and is usually applicable in the context of product-oriented schemes. It contains principles and requirements for a body certifying products, processes and services against specific requirements.

Chapter 3. Identification and review of relevant schemes

3.1 Initial identification of relevant schemes

In order to gather information on various types of compliance systems applicable in existing schemes, an initial list of 27 schemes was established. This list was built with the intention to cover a wide variety of schemes so as to the favour a similar diversity in terms of compliance systems (e.g. the level of development, the stakeholders involved, the nature of the verification activities, etc.).

The following criteria were used to draw up this list of schemes:

- Scope – Product-or organisation-oriented scheme
- Topics – Environment, social, quality, safety, etc.;
- Regulatory framework – Voluntary initiative, mandatory policy;
- Scheme owners – Private or public schemes;
- Geographical coverage – national, EU, international.

The review included schemes that primarily address the environmental performance of products or organisations – and from that perspective, share common objectives with the PEF and OEF methodologies – as well as schemes that address issues that are not directly related to PEF/OEF, such as economic/social sustainability criteria or quality/safety aspects. These latter schemes were considered relevant for review because some components of their compliance systems could be useful for PEF/OEF options. In particular, sustainability aspects often relate to "invisible" characteristics of products and thus traceability to the product is essential (e.g. Fairtrade or FSC); furthermore, quality and safety schemes have well-established, long-running compliance systems that cover a wide range of product categories (e.g. NF, GS mark).

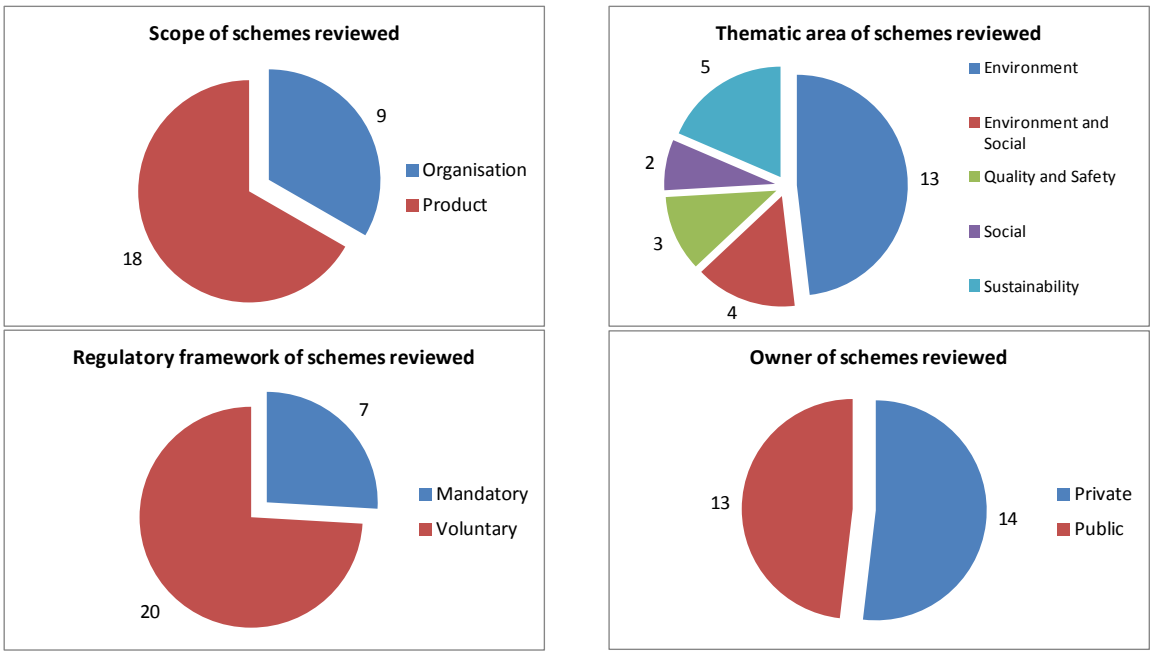
Table 1 presents the schemes considered the most relevant. These schemes were examined in order to determine their potential for further analysis that would focus specifically on their compliance systems.

Table 1: Initial list of the 27 schemes reviewed

Name	Scope (product or organisation)	Topic	Regulatory framework	Owners (public/private)	Geographical coverage
Australian National Greenhouse and Energy Reporting (NGER)	Organisation	Environment (GHG emissions)	Mandatory	Public (Clean Energy Regulator)	Australia
Blue Angel (Blauer Engel)	Product	Environment (climate, water, resources, environment and health)	Voluntary	Public (German Federal Ministry for the Environment – BMU)	International (originally designed for the German market)
Carbon Trust – Organisational carbon footprint and Value chain carbon footprint	Organisation	Environment (GHG emissions)	Voluntary	Private (Carbon Trust)	International (initiated in the UK)
Carbon Trust – Product carbon footprint	Product	Environment (GHG emissions)	Voluntary	Private (Carbon Trust)	International (initiated in the UK)
CE marking	Product	Quality and Safety	Mandatory	Public (EU)	Products sold in EEA and produced in EAA or in third countries
EU Organic farming label	Product	Environment (Organic farming)	Voluntary	Public (EU)	Products sold in EU and produced in EU or in third countries
EU Timber Regulation (EUTR) – EU Regulation No 995/2010	Product	Sustainable resource use (Wood)	Mandatory	Public (EU)	Timber and timber products sold in EU, wherever they are produced
European Social Label	Organisation	Social (Social climate)	Voluntary	Private (European Social Label Institute)	EU
Forest Stewardship Council (FSC)	Product	Sustainable resource use (Wood)	Voluntary	Private (FSC International)	International
French mandatory framework for corporate GHG reporting (Grenelle II law – Art. 75)	Organisation	Environment (GHG emissions)	Mandatory	Public (French authorities)	France
GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	Organisation	Environment (GHG emissions)	Voluntary	Private (WRI and WBCSD)	International
GHG Protocol – Product Life Cycle Accounting and Reporting Standard	Product	Environment (GHG emissions)	Voluntary	Private (WRI and WBCSD)	International
Global Organic Textile Standard (GOTS)	Product	Environment and social (Organic textile)	Voluntary	Private (Global Standard gemeinnützige GmbH)	International
Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers	Organisation	Environmental and social	Voluntary	Private (Green Seal)	International but primarily for US market
Green Seal – Products and services	Product	Environmental and social	Voluntary	Private (Green Seal)	International but primarily for US market
GS Mark	Product	Quality and safety	Voluntary	Public (German Federal Ministry of Labour and Social Affairs – BMAS)	International (originally designed for the German market)
International Fairtrade Certification Mark	Product	Sustainable development (Fair trade)	Voluntary	Private (FLO International)	International
Japan Environmental Management Association for Industry – EcoLeaf Environmental label	Product	Environment	Voluntary	Public (JEMAI)	Japan

Name	Scope (product or organisation)	Topic	Regulatory framework	Owners (public/private)	Geographical coverage
Japan Tokyo Metropolitan Government Emission Trading Scheme	Organisation	Environment (GHG emissions)	Mandatory	Public (Tokyo Metropolitan Government)	Tokyo metropolitan area
Korean Carbon footprinting labelling programme	Product	Environment (GHG Emissions)	Voluntary	Public (Korea Environmental Industry and Technology Institute)	Korea
Korean Environmental Declaration of Products (EDP)	Product	Environment	Voluntary	Public (Korea Environmental Industry and Technology Institute)	Korea
Label LUCIE	Organisation	Social (Corporate Social Responsibility)	Voluntary	Private (LUCIE Agency)	France
Marine Stewardship Council (MSC)	Product	Sustainable resource use (Wild fish & seafood)	Voluntary	Private (Marine Stewardship Council)	International
NF Mark/NF service	Product	Quality and safety	Voluntary	Private (AFNOR)	International (originally designed for the French market)
Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC	Product	Sustainable resource use (biofuels)	Mandatory	Public (EU)	Biofuels sold in the EU, wherever they are produced
Roundtable on Sustainable Palm Oil (RSPO)	Product	Environmental and social	Voluntary	Private (RSPO)	International
UK Mandatory Carbon Reporting – Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013	Organisation	Environment (GHG emissions)	Mandatory	Public (UK Government)	UK

Given the large number of schemes under review, it is useful to start with a brief overview of the scheme categories. More than half of the schemes reviewed were product-oriented voluntary systems. In addition, all the privately-owned schemes reviewed were naturally voluntary schemes whereas public schemes studied here were balanced between voluntary approaches (6) and mandatory policies (7).



Overview of the 27 schemes reviewed

3.2 General description of the schemes reviewed

3.2.1 Global overview

The first step of the analysis was to gather background information on the most notable characteristics of each of the 27 schemes. This was a prerequisite for deeper analysis of a sub-group of the 27, to fully grasp how the scheme's compliance system operates and to identify the most interesting schemes for further compliance system-oriented analysis.

A first set of "descriptive" factsheets presenting the main characteristics of each scheme was developed. These factsheets are presented in Annex 2. Each factsheet addresses the following aspects:

- Key features – Nature of the scheme (e.g. reporting, conformity mark, accounting methodology, etc.); Topic (i.e. thematic area such as environment, sustainability, quality/safety, etc.); Scope (product or organisation-oriented scheme); Regulatory framework (voluntary or mandatory); Scheme owner (public or private); Compliance system (does it exists? does it deals with invisible characteristics?);
- Context and scheme status – History and future developments; Stakeholders;

- Scope of the scheme – Targeted products/sectors; Scope of the assessment; geographical scope;
- Companies using the scheme;
- Link with other schemes or standards;
- Public information;
- General features of the compliance system.

Table 2 is a synthesis of the 27 factsheets, presenting the nature and intended use of the schemes and the most striking findings on their compliance systems. This table also indicates the schemes selected for further analysis of their compliance system (i.e. rows highlighted in blue) along with justifications for the choices made (in the last column of the table).

Table 2: Summarised description of the 27 schemes reviewed

Name	Nature of the scheme	Intended use	Starting year	Compliance system	Relevance for further analysis of the compliance system
Australian National Greenhouse and Energy Reporting (NGER)	Carbon reporting	National and international GHG reporting, reduction of GHG emissions, Australian emissions trading scheme.	2007	Reporting companies are not required to perform third-party audits before submitting emissions data to the authorities. However, such audits can be initiated by the authorities for any reason.	Compared to the recent French and UK mandatory GHG reporting, this regulation has been in place for a longer time, is better documented and has a more developed compliance system.
Blue Angel (Blauer Engel)	Seal of approval (Type I Ecolabel)	This label is designed to help distinguish the products that have better environmental/health performance.	1978	Each product group has a number of Basic Award Criteria. These criteria are verified by a single certification body: RAL gGmbH.	The Blue Angel is the first and oldest environment-related label for products. It is an internationally recognised and respected ecolabel.
Carbon Trust – Organisational carbon footprint and Value chain carbon footprint	Carbon reporting with certification & Accounting tool	The Carbon Trust Standard is a mark of achievement and recognition for organisations measuring and reducing GHG emissions.	2008	Certification activities are carried out by the Carbon Trust Certification Limited, which is a wholly-owned subsidiary of Carbon Trust and is accredited by UKAS.	This scheme could be of relevance for a factsheet but was not selected to avoid a too strong balance towards carbon-related schemes.
Carbon Trust – Product carbon footprint	Quantitative environmental labelling (carbon) & Accounting tool	It can be used to obtain labels like the Carbon Reduction Label and Carbon Label.	2007	Certification activities are carried out by the Carbon Trust Certification Limited, which is a wholly-owned subsidiary of Carbon Trust and is accredited by UKAS.	This scheme could be of relevance for a factsheet but was not selected to avoid a too strong balance towards carbon-related schemes.
CE marking	Conformity mark	This Conformity mark enables free movement of products within European market. It is the manufacturer's visible confirmation that its product complies with European legislation.	1993	The compliance system varies according to the products categories. For some products, only tests are performed, for others the quality system is audited. Depending on the products' category, an authorised third party (notified bodies) can be required to verify the conformity.	Within the list, this is the only product-oriented mandatory scheme that covers a wide range of products categories and that includes different compliance instruments.
EU Organic farming label	Seal of approval	Supply chain information	2002	Each EU MS must implement a compliance system and designate one or more competent authorities that can delegate the inspection to control bodies. Appropriate bodies accredit the control bodies.	An EU initiative with MS-specific compliance systems.
EU Timber Regulation – Regulation (EU) No 995/2010 (EUTR)	Due diligence	The regulation requires traders of timber or products made with timber to verify the origin of the timber they trade and make sure it is harvested legally.	2013	In each member state, a competent authority coordinates the application of the Regulation, carries out checks on timber and timber-product traders as well as on monitoring organisations, and establishes penalties.	This regulation entered into force recently.
European Social Label	Seal of approval	This scheme supports the recognition and promotion of the best performing companies as regards to corporate social climate.	2011	Although some provisions regarding how the label is awarded are mentioned on the ESL website, it can be considered that there is no fully developed compliance system.	This scheme is a relatively modest private initiative based on a survey of employees. There is no compliance system per se.

Name	Nature of the scheme	Intended use	Starting year	Compliance system	Relevance for further analysis of the compliance system
Forest Stewardship Council (FSC)	Seal of approval	The FSC label gives a guarantee to consumers that products come from well-managed forests. The label relies on standards and on a certification system to ensure sustainable forestry management and traceability of FSC-certified wood and products along the supply-chain.	1994[29]	FSC certificates are awarded by independent certification bodies, which are accredited by ASI.	FSC is a well-developed initiative with balanced governance. The compliance system addresses the issue of traceability to the product through the chain of custody approach.
French mandatory framework for corporate GHG reporting (Grenelle II law – Art. 75)	Carbon reporting	This reporting was created to raise companies' awareness and implement reduction actions at company level. The reporting is done to the authorities of the French region where the company is headquartered.	2010	Follow-up activities of the reporting made by companies should be performed by regional authorities. This is supposed to include the verification of the compliance of the reports with the law. However, no overall compliance system has been developed either at national or regional level.	This policy is relatively recent. Although some provisions regarding the follow-up of the carbon emissions declared to public authorities are mentioned in the law, it can be considered that there is no fully developed compliance system.
GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	Accounting methodology	Internal accounting, and possible external reporting for the Corporate Standard. The Scope 3 Standard is for value chain information (beyond an individual corporation, but linked to one), similarly for internal accounting and external reporting.	2001	There is no built-in compliance system in this scheme. However, guidance and requirements on verification activities are presented in a manner relatively similar to OEF guide. The standards specify the need for verification and suggest that this is best awarded by a third-party.	This widely used scheme provides guidance/requirements on the nature of verifications that should be performed to provide assurance.
GHG Protocol – Product Life Cycle Accounting and Reporting Standard	Accounting methodology	The Product Standard is intended to support performance tracking of a product's GHG inventory and emissions reductions over time.	2011	There is no built-in compliance system. However, guidance and requirements on verification activities are provided in a manner relatively similar to PEF in the sense that verification (referred to as "assurance") is required and third-party verification is preferred (over first-party verification).	This widely used scheme provides guidance/requirements on the nature of verifications that should be performed to provide assurance.
Global Organic Textile Standard (GOTS)	Seal of approval	The aim of the standard is to define globally recognised requirements that ensure organic status of textiles, addressing both environmental and social impacts.	2006	Approved certification bodies certify entities of the textile supply chain and their products according to the GOTS. The accreditation process for certification bodies has been specifically developed for GOTS. The main partner for accreditation is the International Organic Accreditation Services (IOAS) but the applying certification body may assign another accreditation body under certain conditions.	This scheme has developed a compliance system with requirements related to invisible characteristics.

[29] 1994 for forest management certification and 2004 for chain of custody certification

Name	Nature of the scheme	Intended use	Starting year	Compliance system	Relevance for further analysis of the compliance system
Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers	Seal of approval	The GS-C1 Pilot Sustainability Standard for Product Manufacturers certifies socially and environmentally responsible businesses.	2009	Third-party certification activities are required. The certification division of Green Seal is in charge of this task.	The market uptake of this standard currently seems rather limited since no companies are referenced under it.
Green Seal – Products and services	Seal of approval (Type I Ecolabel)	Green Seal is an independent label that allows companies to make improvements to the environmental and social impacts of their product and to communicate this performance to the public.	1989	Third-party certification activities are required. The certification division of Green Seal is in charge of this task.	This scheme could be of relevance for a factsheet but was not selected since another type I ecolabel (blue Angel) has already been retained.
GS Mark	Conformity mark	External communication	1977	The GS Mark and certificate are obtained from accredited certification bodies and test laboratories.	This is a well-established conformity mark.
International Fairtrade Certification Mark	Seal of approval	The objective of the Fairtrade Mark is to prove that the conditions of production and trade of products are socially and economically fair as well as environmentally responsible.	2002	FLO-CERT verifies compliance with Fairtrade standards. FLO-CERT is an independent certification company, owned by FLO.	Many requirements relate to production and trade conditions that cannot be verified or measured directly on the product, such as a fair price for small producers, no child work, etc. The Fairtrade standards contain requirements on the entire value chain, including producers and trade parties.
Japan Environmental Management Association for Industry – EcoLeaf Environmental label	Type III Ecolabel	The EcoLeaf programme encourages companies to provide quantitative information on the environmental impact of the products they sell.	2002	An independent verification of the label and data according to ISO 14025 is required. Verification can be carried out either internally or externally.	Very little information on the compliance system available in English.
Japan Tokyo Metropolitan Government Emission Trading Scheme	Reporting process and reduction policy	The objective of this scheme is to reduce GHG emissions through reporting obligations, reduction obligations and emissions trading.	2002	Annual verification by a registered verification agency is required. Checks concern both emission levels and reduction measures.	Very little information on the compliance system available in English.
Korean Carbon footprinting labelling programme	Quantitative environmental labelling (carbon)	Supply chain information	2009	There is an initial audit as well as annual checks to make sure the labelled goods and services respect the PCRs.	Very little information on the compliance system available in English.
Korean Environmental Declaration of Products (EDP)	Type III Ecolabel	External communication	2001	There is a compliance system that includes examinations. Compliance should be verified at least once a year.	Very little information on the compliance system available in English.
Label LUCIE	Seal of approval	The purpose of the label is to assess, develop, and promote the CSR actions and commitments of organisations.	2008	Vigeo and Afnor Certification conduct third-party evaluations.	An example of an organisation-oriented scheme.

Name	Nature of the scheme	Intended use	Starting year	Compliance system	Relevance for further analysis of the compliance system
Marine Stewardship Council (MSC)	Seal of approval	external communication (label)	1997	MSC certificates are awarded by independent certification bodies, which are accredited by the ASI (Accreditation Services International).	This scheme could be of relevance for a factsheet but was not selected because its general philosophy is close to FSC.
NF Mark/NF service	Conformity mark	External communication (label) to guarantee the quality and safety of the product.	1947	AFNOR Certification awards the mark. AFNOR Certification relies on other organisations which participate in the certifications processes and form part of the "NF network" – i.e. authorised bodies accredited by the COFRAC, technical secretariats, and testing and analysis laboratories.	This is a well-established conformity mark.
Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC	Sustainability criteria	The EU Renewable Energy Directive (RED) establishes sustainability criteria for biofuels.	2009	The compliance system as such is set out in the RED and accompanying legislation/guidance. Implementation of the compliance system is not complete in all member states and voluntary certification systems as a means of implementing the scheme are still being developed and recognised by the Commission.	An EU initiative with implementation of several certification systems.
Roundtable on Sustainable Palm Oil (RSPO)	Seal of approval	This labelling initiative is used for external communication. It has been set up to allow consumers to make well-informed choices. The RSPO-trademark signals that the palm oil used in a product bearing this trademark has been produced in accordance with the RSPO requirements.	2002	No public claims relating to compliance with the RSPO principles and criteria can be made without third-party verification and certification. The third party is a RSPO-approved independent certification body.	An example of initiative focusing on a specific supply-chain.
UK Mandatory Carbon Reporting – Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013	Carbon reporting	Reporting, to raise company awareness and to help meet political objectives on CO_2 reduction	2013	There is no verification requirement for GHG emissions reported by companies.	A recent scheme that entered into force in 2013. No compliance system has been developed.

3.2.2 Focus on the specific features of the compliance systems of selected schemes

The second step of the analysis concentrated on the specific features of the compliance systems for the 14 selected schemes (highlighted in blue in Table 2). These schemes were analysed in further depth, focusing on: 1/ the design and rules governing their compliance systems, and 2/ the concrete implementation of the compliance system. A second set of factsheets[30] was developed for that purpose. These factsheets are provided in Annex 3. A generic "compliance system" factsheet is presented in Table 3 to describe the various aspects that were examined.

Table 3: Presentation of the template used for the "compliance system" factsheets

Name of the scheme		
Key messages		
Nature of the scheme	This section includes a brief presentation of the scheme. It aims at presenting the purpose of the scheme, its scope (product or organisation) and its regulatory framework (voluntary or mandatory).	
Advantages		**Drawbacks**
This part aims at underlying the most interesting aspects and perceived pros and cons of the scheme's compliance system in view of developing options for PEF/OEF declarations. This may include aspects such as the intensity of the verification activities, the period of validity of the proof of compliance, the flexibility of the scheme, the consequences in case of non-compliance, the governance, the recognition and reputation of the scheme, etc.		
Compliance system set-up		
Initial process	This section describes the initial process for an operator to enter the scheme (i.e. application or registration). This process can include an initial conformity assessment that proves the compliance of an organisation or a product to the scheme's requirements. The main topics presented here are (when applicable): ▪ The steps of the initial process to enter the scheme (e.g. when certification is involved, how to be certified), including the parties involved, their role and responsibilities. If relevant, this section also presents the various types of verification procedures that exist under the scheme (e.g. depending on product categories); as well as the possible adjustments of the generic procedure that can be made under certain conditions (e.g. for small organisations). ▪ The handling of non-compliances detected during the initial assessment. ▪ The type of proof of compliance awarded and its period of validity (i.e. number of years).	
Surveillance	This section describes the surveillance activities occurring after the initial assessment. The purpose of surveillance is to maintain assurance of compliance. It includes for instance follow-up audits, monitoring visits, etc. Aspects covered in this section are the same as for the initial application process. In addition, the frequency of surveillance is mentioned as well as particular factors that may trigger surveillance activities.	
Renewal	This section describes the renewal procedures that are launched when the period of validity of the proof of compliance ends. Renewal procedures may be similar to the initial application process. In other cases, it can be a simplified procedure or a procedure focusing on particular criteria where the risks of non-compliance have been identified as potentially higher.	

[30] Note that this second set of factsheet is not fully self-standing. Although basic information on the nature of the schemes is briefly recalled, it is preferable to read first the corresponding descriptive factsheets.

Name of the scheme	
Transparency – Availability of information	
Requirements and other information for operators	An "operator" refers to an organisation or an individual applying (voluntarily or mandatorily) to the scheme. This section assesses the availability of public information for such operators. In particular, it indicates if the following essential materials are freely accessible: ▪ Standards/requirements/criteria of the scheme (against which compliance is verified); ▪ Guidance documents to help in understanding and interpreting the requirements (in case principles and criteria of a scheme are only provided in general terms); ▪ When applicable, other important information such as the steps to enter the scheme, the list of registered certifications bodies, etc.
Requirements and other information for verifiers	A "verifier" refers to an organisation or an individual that undertakes conformity assessment or surveillance activities. This section assesses the availability of public information for such verifiers. In particular, it indicates if the following essential materials are freely accessible: ▪ Certification rules, including the rules for issuing the compliance certificate; ▪ Requirements/criteria for the accreditation process.
Registry of compliant products or organisations	This part specifies whether a public list or database of certified/approved companies and/or products is available. In some cases, other information such as the attestations/certificates awarded or the evaluation or audit reports can also be accessible.
Complaint and fraud reporting	This part indicates whether public information is available on complaints and dispute resolution, and on potential cases of frauds (e.g. misuse of labels), etc. In addition, the possible existence of a complaint/fraud management system is mentioned here. Such system may include detailed procedures for filing a complaint, for its examination, etc. as well as reports on established cases of fraud, a list of infringers, a database of complaints (including elements such as the name of the complainant, the company/product concerned, the nature of the complaints, the complaint status, etc.).
Traceability	
Record-keeping requirements	This part details the requirements regarding traceability management for operators. It addresses questions such as: Are there specific requirements regarding the traceability/record keeping? Is there a checklist of documents and records to keep? How long do operators have to keep them? Are there traceability requirements for the entire chain of custody or only particular operators? When appropriate, the traceability can necessitate information on the product development, the production conditions and related data, the chain of custody, the trade conditions, the tools and methods used to make a certain claim (e.g. for the calculation of the environmental impact of a product), or any other product characteristics. When relevant, a specific focus on embedded/invisible aspects is made in this section. Furthermore, potential requirements regarding the traceability management related to the verification process are also mentioned in this section (e.g. documents and records that the certifiers must keep and other documentation management aspects within the certification body).
Management of invisible characteristics	This part gives examples of techniques employed to verify the compliance in the specific case of embedded/indirect characteristics. Without being exhaustive, it presents few representative illustrations of specific issues induced by the necessity to check invisible characteristics, and how these issues are dealt with.
Governance	
Process for developing the compliance system	This section depicts the procedures followed to develop the compliance system. When available, the general features of the compliance system development are presented. Information can include: ▪ the existence of such procedures; ▪ the development and validation process; ▪ the parties involved and their responsibilities; ▪ the integration of a risk analysis approach.

Name of the scheme	
Process for updating the compliance system	This section depicts the procedures for revising and updating the compliance system. Further precisions regarding the factors triggering a revision process and the linkage with the standard update can be mentioned.
Control of verifiers	This section gives information on the system of control of the verification bodies (skill assessment, control of the verification process, control of a sample of verifiers, etc.). The procedure that must be followed to become verifier is described. This may involve accreditation. In this case, the accreditation body and the related accreditation standards are mentioned.
Cost of the compliance	
This section describes the cost structures and pricing systems of the scheme. When possible, the costs are differentiated between: ▪ Direct vs. indirect costs; ▪ Fixed vs. variable costs; ▪ Costs arising at different stages in a certification process When information is available, the factors influencing the costs such as the number of site, the number of employees, the turnover and other criteria are mentioned.	
References	
▪ Key sources of information and data ▪ References of the documents mentioned in the factsheet	

3.3 Cross analysis of the compliance systems

The compliance systems of the schemes can be analysed through the following technical features:

- Design and structure of the requirements of the scheme;
- Verification activities;
- Governance of the compliance system.

The following paragraphs present the various alternatives identified from the review.

3.3.1 How are the rules of the scheme structured?

3.3.1.1 Requirements for operators

As defined in section 2.1, the purpose of any scheme is to address an issue considered relevant because of its associated risk(s). A scheme may tackle issues such as quality or safety of products, sustainable use of resources or social rights. In order to do so, the developers of the scheme formalise a set of rules that may be applied to product and organisations. Put simply, the scheme needs to state clearly its requirements.

Although this basic principle is always valid, there is a true diversity of options in practice, as presented in the various cases hereafter. The general organisation of the rules depends on several factors such as the scheme's geographical coverage, the type of issue addressed, the regulatory framework (voluntary or mandatory), etc.

Case 1 – Standalone document

In the GOTS there is a single standard document to be applied for any type of textile, in any area of the world[31]. Similarly, in the organisation oriented-scheme Label LUCIE, there is a single evaluation framework[32] on seven commitments and 28 principles for actions that can be applied to any company.

Case 2 – General Principles and national versions

FSC and RSPO are international voluntary schemes oriented toward the specific issues of sustainable wood and sustainable palm oil production, respectively. In both cases, international "Principles and Criteria"[33,34] have been developed and are completed with national standards. Indeed, it is necessary to adapt the general principles to the regional or national level in order to reflect the diverse conditions of timber or oil production encountered in different parts of the world.

Case 3 – Generic standards and product standards

FLO International has developed generic standards for production according to the type of producer (small producer organizations, hired labour, contract production) and for trade (trade standard). Additional standards apply to particular producer types supplying particular products (cocoa, coffee, cane sugar, etc.)[35].

Case 4 – No generic standard, product-specific requirements only

In the case of Type I ecolabels, such as the Blue Angel of Green Seal, there are no generic overarching requirements presented in a single document. All requirements are classified by product categories and are called "Basic Award Criteria of the environmental label for product X" in the case of Blue Angel and "Green Seal Standard for product X" in the case of Green Seal.

Case 5 – Requirements written in law

For mandatory schemes, the requirements are written in law. An example of this is the EU Timber Regulation No 995/2010[36].

3.3.1.2 Guidance for operators

Requirements can be completed with non-normative guidance documents. In general, such documents provide clarification on specific criteria/requirements of the scheme. The objective is to prevent any inconsistent or incorrect interpretation of the requirements.

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[31] International Working Group on Global Organic Textile Standard, 2011. Global Organic Textile Standard (GOTS) – Version 3.0

[32] Label LUCIE, 2012. Référentiel d'évaluation RSE du label LUCIE – 7 engagements et 28 principes d'actions – Version 1 - 28/03/2012

[33] Forest Stewardship Council A.C., 1996. FSC International Standard – FSC principles and criteria for forest stewardship – FSC-STD-01-001 (version 4-0)

[34] RSPO, 2007. RSPO Principles and Criteria for Sustainable Palm Oil Production

[35] Faitrade International, 2011. List of Fairtrade International Standards, November 2011

[36] (EU) No 995/2010 – Regulation the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market

Additional guidance can be provided by the scheme owner in voluntary schemes such as FSC, MSC, RSPO or Fairtrade as well as in mandatory contexts – see for instance EC guidance document for EUTR[37].

In addition, certifiers can further explain to operators how they work and how they will assess compliance with the standards. FLO-CERT for instance, makes publicly available its "Compliance Criteria"[38] which are established to translate requirements of the Fairtrade standards and FLO-CERT certification policies into verifiable control points that are evaluated during the certification process to determine compliance with the Fairtrade standards. Non-conformity with a compliance criterion is considered as non-conformity with the respective standards requirement.

3.3.1.3 Guidance and requirements for verifiers

When third-party verifiers are required in a scheme's compliance, requirements and/or guidance can be developed for them. Requirements for certifications bodies have been developed for instance in the MSC, FSC and GOTS schemes.

The manual for the implementation of the GOTS[39] contains requirements and detailed specifications for the application of the GOTS and implementation of the related quality assurance system for certifiers. MSC[40] and FSC[41] requirements for certification bodies are based on the ISO Guide 65[42]. The objective is to ensure that certification bodies operate in a consistent, reliable, and credible manner.

In some cases, certification bodies can develop procedures for verifying compliance but these procedures are intentionally not made publicly available. This is the case for NF and GS labels.

3.3.1.4 Who is involved in the development of the requirements?

Blue Angel and NF are product-oriented schemes, with particular requirements for distinct product categories. In these two schemes, any actor interested in entering the scheme can propose a new set of requirements for a product category that does not exist yet.

In a number of international schemes, such as FSC, MSC, RSPO, GOTS, there are procedures for standards development and revision that are based on identification and consultation of affected stakeholders as well as possible public consultations.

An alternative system that is noteworthy of mention is that of the EU Renewable Energy Directive (RED). The RED establishes sustainability criteria for biofuels. To prove compliance with the criteria, stakeholders of the biofuel sector can develop voluntary "sustainability schemes" that can be recognised by the EC.

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[37] European Commission (n.d.). Guidance document for the EU timber regulation

[38] See for instance FLO-CERT GmbH, 2013. Public Compliance Criteria List – Small Producers' Organisations

[39] International Working Group on Global Organic Textile Standard, 2011. Manual for the implementation of the Global Organic Textile Standard – Issue of 01 March 2011

[40] Forest Stewardship Council A.C., 2009.General requirements for FSC accredited certification bodies: application of ISO/IEC Guide 65:1996 (E)

[41] Marine Stewardship Council, 2013. MSC Certification Requirements – Version 1.3, 14 January 2013

[42] ISO/IEC Guide 65: 1996 (E) General requirements for bodies operating product certification systems

3.3.2 How are verification activities carried out?

The "intensity" of verification performed depends on:

- The level of risk associated with non-compliance, for instance in quality/safety schemes;
- The level of reassurance being sought to ensure the overall credibility of the scheme, for instance in sustainability-related voluntary schemes;
- The existing constraints in terms of costs, resources, available techniques, etc.

The type of verification performed is the outcome of a balance between these various aspects. In some cases, mandatory schemes can be implemented without any clearly defined verification system. This is the case for the French and UK corporate carbon reporting. Furthermore, in some cases – in particular for schemes with a continuous improvement approach – the intensity of verification can increase over time along with more challenging requirements.

3.3.2.1 Parties involved

As mentioned in section 2.2.1, verification activities can be undertaken by different "parties" (i.e. individuals or organisations).

First-party verification

First-party verification is possible in some schemes, usually under certain conditions.

For instance, in the Japan Ecoleaf (Type 3 Environmental declaration), if a company demonstrates a certain level of performance of its internal management system (procedures for data collection/processing, verification, and publication), then the company can be certified to verify its own data.

In the CE marking system, the manufacturer is responsible for the CE marking attribution. The manufacturer performs an initial verification to ensure the conformity of its product, tests the products and/or the quality system, and draws up a technical document and declaration of conformity. Depending on the product category and its risks, the compliance system differs and a Notified Body (third party) could be required.

In the GHG Protocol Standard for products, there is a requirement for "assurance" but the choice of whether to choose first- or third-party assurers is left to the reporting company.

Third-party verification

Most of the reviewed schemes rely on third-party verification. However, the situations behind this concept are varied.

- **The owner of the scheme is the certifier** – This is the case with the Green Seal Type I ecolabel in which the certification division of Green Seal is in charge of the verification activities, or with the European Social Label (ESL) in which the ESL Institute awards the label.
- **The owner of the scheme has created a separate entity for certification** – The Carbon Trust has a wholly-owned subsidiary called Carbon Trust Certification Limited that carries out the certification activities. Another example can be seen in

the Fairtrade scheme: in 2004, Fairtrade International split into two independent organisations: FLO, which sets Fairtrade standards and provides producer support, and FLO-CERT, which inspects and certifies producer organisations and audits traders.

- **Verification activities are carried out by an independent registered certification body –** In this case, the scheme includes requirements for the certification bodies to be eligible for certification activities under a given scheme. In general, a list of authorised certification bodies is available for operators. Here are some examples:
  - In the EU Organic farming scheme, the competent authorities in each Member State can delegate verification activities to control bodies. These control bodies must be accredited by a member of the European cooperation for Accreditation (EA). Members of EA include national accreditation bodies such as COFRAC in France or DAkks in Germany.
  - In the FSC, MSC and RSPO schemes, only independent certification bodies accredited by the ASI (Accreditation Services International) can award compliance certificates.

3.3.2.2 Scope of the assessment

Schemes tackling issues related to quality or safety (e.g. CE marking, NF, GS mark) tend to focus on the product itself and its measurable technical characteristics. In such schemes, production processes can also be verified as well as quality management systems within the organisation.

On the other hand, schemes related to sustainability issues (e.g. use of natural resources, conditions of production and trade) deal with characteristics that are mostly invisible in the final product. Consequently, verification activities have to cover the entire value chain including the producers and the traders. For that reason, sustainability schemes often include traceability requirements, so that product manufacturers and retailers can make claims to consumers about the social or environmental impacts associated with production.

3.3.2.3 Ex-ante and ex-post verification activities

Ex-ante and ex-post verification activities are two distinct approaches that share the same objective of ensuring the compliance of the product/organisation with the requirements of a given scheme. In general, an appropriate level of assurance in the scheme is reached when these two approaches are used in combination. However, there is a wide variety of situations across the schemes. Indeed, each scheme has developed its own balance between ex-ante and ex-post verifications with dedicated verification procedures and instruments.

The Japanese ISO Type III environmental label Ecoleaf has a thorough initial conformity check system but once the label has been awarded, there is apparently no follow-up compliance check. Conversely, in the Australian NGER scheme (mandatory GHG reporting for corporations) GHG emissions data can be communicated to the authorities without prior third-party verification. In this case, the external verification only relies on post-reporting audits that maybe initiated for any reason (but in particular, when the authorities have a suspicion of non-compliance).

Between these two extreme cases, a number of schemes (e.g. FSC, MSC, RSPO, Fairtrade, Label LUCIE, NF) are operated through a "certification cycle" as it is called in the Fairtrade scheme. The cycle begins with initial verification activities, and if the requirements are met, a proof of compliance such as a certificate with a period of validity (usually limited to a few years) is awarded. After receiving this proof of compliance, surveillance activities are performed on a regular basis (common frequencies are every year or every two years). In general, such monitoring tends to focus on specific areas of the requirements where risks of non-compliances or minor non-compliances were identified during the initial verification. Finally, a renewal procedure is launched. This occurs typically a few months before the end of the period of validity of the label (for the specific product or organisation). Depending on the scheme, renewal can involve full verification similar to the first application, or a simplified procedure. In another approach the certificate awarded can remain valid indefinitely as is the case for the GOTS and EU organic farming schemes. In these cases, there is no need for renewal activities. However, if relevant non-conformities are observed during surveillance activities, the certificate can be withdrawn.

Note that there is in general a stepwise approach to certificate withdrawal. Time is given to the organisation to implement corrective actions when non-conformities are observed. The certificate can first be suspended before being eventually withdrawn, such as in the RSPO scheme.

3.3.3 What is the governance of the compliance system?

The issue of who has authority and decision-making power has an effect on the overall management of the scheme. Again, a variety of situations can be noted, with two key factors having an influence on governance: the type of owner and the regulatory framework of the scheme.

In EU policies such as the EU organic farming label or the EUTR, the EU is the owner of the scheme and in each Member State, a competent authority coordinates the application of the Regulation and implements its own compliance system at the national level. The final decision on the compliance or non-compliance of an operator is made at the national level.

In international voluntary schemes such as FSC and MSC, an important emphasis is made on the governance structure. It is essential for the credibility and transparency of such schemes that the power remains balanced between sectors, regions, and private and public interests. In line with this idea, FSC does not award compliance certificates. Only certifications bodies can assess compliance and decide whether a certificate can be awarded. The certification activity market is open to any certification body as long as it is accredited. The organisation that wants to be certified is free to contact several certification bodies to ask for quotes. Other schemes, such as the Blue Angel or Fairtrade schemes, also have a multi-stakeholder approach in their governance but only with one body performing certification activities (RAL and FLO-CERT, respectively). In Label LUCIE and RSPO the number of possible certification bodies is relatively limited (two and twelve, respectively).

3.4 Synthesis of the key features of the compliance systems

3.4.1 About the reliability of compliance systems

The concept of reliability (as defined in section 2.1) of a compliance system is difficult to evaluate quantitatively. A possible approach would be to define the "reliability rate" (expressed as a percentage) of a compliance system as the ratio between 1/ the number of products or organisations which are *truly compliant* and 2/ the total number of products or organisations *claiming to be compliant*. However, such information is not accessible in the vast majority of schemes since it would require verification of all products placed on the market or on all sites (in the case of an organisation).

In the vast majority of cases, only sample checks are carried out. The number of proven non-compliances can be recorded by verifiers in order to produce reliability-related indicators such as the "non-conformity rate". Such rates are always based on a partial view of products (e.g. samples) or organisations and might be considered as a proxy for the overall "reliability rate" which is in general impossible to assess. Nevertheless, several reasons suggest that the non-conformity indicator is not sufficient to address the broader issue of reliability:

- There can be various degrees of non-conformity (e.g. minor or major) not necessarily leading to full non-compliance and exclusion of the operator from the scheme.
- The number of observed non-conformities is influenced by other criteria such as the type and frequency of controls, the number of control points, the complexity and stringency of the requirements, the competencies of the verifier, the level of transparency regarding the public communication of non-compliances, etc. For example, a scheme with no recorded cases of non-compliance (i.e. 0% of non-conformity) may have requirements that are too permissive and/or verification activities that are too superficial. According to certification bodies, it is somewhat natural to observe some non-conformities since the operators tend to get as close as possible to the required limit in order to optimize their production systems and limit their production costs[43].
- Full (100%) conformity offers no room for improvement, no possibility to see what the "weak points" of operators are. Thus, it is important to design the scheme in a balanced way.

For the scheme owners, operators, consumers, etc., what is at stake is the overall credibility and reputation of the scheme. Reliability is one of the components of credibility. Ultimately, the scheme can be considered as "successful" when it has a proven effect on the market, that is to say that the scheme has shown its efficiency as a market-changing factor leading, for instance, to an increase in the number of safer or greener products on the market. In that perspective, reliability and credibility are prerequisites to reach this final objective.

[43] The requirements on the mechanical resistance of plastic bags can illustrate this aspect. Bag resistance increase when more plastic is used, thus increasing production costs. Consequently, producers try to get as close as possible to the resistance limit and non-conformities are sometimes observed.

3.4.2 Factors having an effect on reliability

Based on the study of the various schemes and the interviews with stakeholders, factors that play a role on a compliance system's reliability have been identified. These factors are described below. It must be underlined that a single factor on its own cannot make a scheme reliable or unreliable. Instead, a given factor plays a role in the overall reliability, while interacting, influencing and being influenced by other factors. Thus, these factors must be studied together in order to get a view on the reliability of a scheme.

Reference / compliance with international verification standards

The fact that a given scheme explicitly refers to one or several standards of the ISO 17000 series (see section 2.3 for details on these standards) can be seen as an indication of its reliability. For instance, for a number of schemes, certifications bodies such as Carbon Trust Certification Limited or FLO-CERT indicate that their compliance with ISO 17065 (formerly ISO 65) has been verified by an accreditation body.

Initial conformity assessment

Initial conformity assessments are carried out before placing the product on the market. The intensity of the verification activities contributes to the reliability of the initial assessment, but at the same time, the design of such activities depends on the purpose of the scheme. For instance, a scheme whose main objective is to initiate a continuous improvement program should avoid "oversized" initial verification.

The verification activities generally rely on well-defined procedures that can include tests, inspections (visual verification of processes and systems, interviews), documentary audits (e.g. on-site or off-site verification of records), etc. For example, the verification procedures to check whether a company respects child labour requirements can be the provision of documentation (certificates, contracts, etc.), on-site inspection, or employee interviews. The combined use of several means contributes to the effectiveness of the verification by providing a deeper and more precise insight into the compliance of the product or the organisation to the scheme's principles. Moreover, the verification of other players in the supply chain may be necessary to bring sufficient reassurance. For example, in the case of fair trade certification, all stakeholders are subjected to initial conformity assessment in order to check that they all comply with and benefit from fair trade conditions.

Finally, in some schemes, a company progress plan must be developed and launched in the context of the initial conformity assessment process. Hence, the company set its own objectives (in line with the scheme requirements) against which it will be evaluated during surveillance. This approach is very positive and contributes to better reliability since it helps the companies to be proactive and more involved in the scheme, by taking into account their specific progress curve.

Surveillance

The existence of surveillance[44] tends to make the compliance system more reliable as it provides continued assurance of the compliance. The frequency and the depth of surveillance activities compared to the initial conformity assessment further influence the reliability of the scheme. Indeed, schemes in which surveillance activities are renewed every year may be more reliable – all other things

[44] In this section, surveillance primarily refers to procedures that are part of the scheme rather than market surveillance.

being equal – than those in which a new assessment is carried out every five years. Furthermore, schemes in which the renewal procedure is a full verification, similar to or more demanding than the initial assessment may be more reliable than schemes where the renewal procedure is lighter with for instance some documentary checks on a limited number of control points.

Nonetheless, the surveillance means needs to be reasonable and justifiable in light of the level of assurance being sought. Indeed, beyond a certain point, any efforts to increase reliability can be counterproductive. In other words, the right balance between surveillance and assurance should be found. Frequent and demanding surveillance assessment can be very inconvenient for companies, in terms of time and cost in particular, while there is, above a certain threshold, no evidence that more intensive surveillance leads to a corresponding improvement in the reliability of the scheme.

Intervention of a verifier

Although different types of actors can undertake verification activities, they must in all cases be independent to avoid being the judge and the one being judged at the same time.

An independent verifier can be an internal or an external verifier. The external verifier can be the owner of the scheme, a second party or a third party[45]. In the latter case, the third party can be accredited by the owner of the scheme or an independent accreditation body. The intervention of an independent external verifier guarantees the objectivity and impartiality of the verification. It avoids verification process bias, for example in the case of employee interviews. Hence, it reinforces the credibility of the verification procedure. The accreditation of the verifier proves that the verifier is competent to perform the verification. The use of an accredited body also contributes to the reliability of the verification process.

Validity of the proof of compliance

The proof of compliance – e.g. a label or a certificate – can be valid either for a predetermined period (usually a few years) or for an unlimited period until proof of non-compliance is observed. The fact that the label/certificate has a defined time of validity implies that at least verification activities for the renewal occur on a regular basis. Therefore, it is as stronger guarantee of continued compliance over time than an unlimited validity.

Flexibility of the compliance system

The flexibility of the compliance system implies that standards and verification procedures can include possible adaptions to take into account the capacity of the operator in terms of human, time, economical and technical resources. Criteria such as the type of structure, the type of activity, the size of the company or its corporate structure as a group or as a stand-alone company can be taken into account. For operators having limited resources, flexibility can be exemplified by a simplification of the certification procedure and/standards, a longer period to implement measures to be compliant with the standards or lower verification costs.

The advantage of flexibility is that it makes the initiatives/certification scheme more adapted and accessible to operators, in particular small companies or producers with limited resources. Requirements that are well suited to the specific constraints of some operators will tend to have a

[45] See section 2.2.1 for the definition of these terms.

positive influence on the over reliability of the scheme. The drawback being that it induces heterogeneity and possible abuses, the requirements not being the same for all the operators, even for the same type of product.

Transparency of the scheme

Transparency is crucial to ensure the credibility and trustworthiness of the scheme. It allows stakeholders (companies involved, public authorities, consumers, etc.) to form their own opinion about its validity and legitimacy. In particular, transparency can play an important role when companies are considering whether to join a scheme. Indeed, if a scheme is highly transparent, the interested companies can evaluate by themselves the principles of the standards, their capacity to comply with the standards, the costs they will have to bear as well as the potential benefits in joining. Nevertheless, a low degree of transparency on some aspects can be a deliberate choice of the scheme owner, such as for instance, not disclosing the detailed control points checked during inspections or audits (in order to use the certification as an element of differentiation).

Traceability

Traceability is essential to track compliance along the supply chain. For instance in the case of products such as food or wood, traceability management procedures will ensure that there are no more compliant products being sold than the amount actually produced.

Management of embedded/indirect characteristics

Since invisible characteristics are in general more challenging to verify, the way this aspect is dealt with in a scheme is an important factor in its final reliability. For invisible characteristics, verification activities should be defined on a case-by-case basis depending on the specific aspect under consideration. The nature and intensity of the verification affects the reliability of the assessment. For instance, regarding child labour, the provision of a sworn statement that no children work in a factory will be less reliable than documentation on the identity of all employees, on-site visits, and anonymous interviews with workers.

Consequences of non-compliance and misuse

The consequences in case of non-compliance and misuse depend on the purpose of the scheme, its overall "attitude" towards operators[46], and when the non-compliance is identified.

During initial assessment, non-compliance generally leads to the implementation of corrective measures. For some schemes, the proof of compliance can still be awarded provided that the non-compliance is considered "minor". The verifier can require a determined period to correct the non-compliance. Minor non-compliances can become "major" if they are not corrected after a certain period.

After the initial assessment, the measures taken in case of non-compliance or misuse can be the implementation of corrective measures within a limited timeframe, the strengthening of verification, the suspension or withdrawal of the label (if any), exclusion from the scheme, or sanctions such as fines

[46] Attitudes can range from verifications performed in an approach of support and learning with the operator to regulatory controls performed with an aim to remove from the market the worst performing products and the "freeriders".

and prosecutions. Measures having strong implications in terms of costs and image for the operator can be considered as having a positive effect on the reliability because of their stronger dissuasive power.

Governance of the scheme

Governance must be impartial, taking into account all the relevant stakeholders during the elaboration of the standards and the verification procedure and avoiding conflict of interest. Cases of conflict of interest to be avoided can be specifically listed in the standard. In addition, management rules can be established for such cases. These aspects are important to ensure the reliability, reputation and overall credibility of the scheme. Balanced governance can further be strengthened by setting up a governance committee composed of stakeholders representing different interests and by carrying public consultations on certain topics of relevance to citizens.

Proper governance mechanisms also contribute to the durability of the scheme. The standards have to be and stay in line with the overall goal of the initiative, by performing evaluation reports and updating the standards and procedure when necessary. A well-defined, well-established, and well-balanced governance will have a positive effect on the reliability of the scheme.

Recognition of the scheme

Aspects such as the number of members, the numbers of years of existence of the scheme, the composition of the governance committee, and the transparency of the scheme are criteria that influence the scheme's image. Consequently, they can influence the level of participation in the scheme and its recognition and perceived reliability. Criticism from NGOs or other stakeholders as regards scheme operations have the potential to undermine its credibility and perceived reliability.

3.4.3 Synthesis of the compliance systems' key features

The features of the schemes have been analysed based on the criteria presented in the previous section. Considering the wide diversity of schemes, a qualitative analysis was performed. The results of this analysis are presented in Table 4. The evaluation depicts our perception of the performance of each scheme, on each criterion, keeping in mind its global characteristics. In order to give some indications on how the scores were attributed, Table 5 presents examples of justifications for low and high scores.

Table 4: Synthesis of the compliance systems' key features

Name	Initial conformity assessment	Surveillance	Intervention of a verifier	Validity of the proof of compliance	Flexibility	Transparency	Traceability	Management of invisible characteristics	Consequences of non-compliance and misuse	Governance	Recognition
Australian National Greenhouse and Energy Reporting (NGER)	--	-	-	++	+/-	+	+	+	++	+	+
Blue Angel (Blauer Engel)	-	--	+++	+	++	--	-	+	n/a	++	++
CE marking	+	-	-	--	++	+	+	-	++	+	+
EU Organic farming label	++	++	++	--	+/-	++	+	++	++	-	++
Forest Stewardship Council (FSC)	++	++	+	++	+	++	++	++	+	++	++
GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	+	n/a	+	n/a	n/a	+	n/a	+	n/a	++	+
GHG Protocol – Product Life Cycle Accounting and Reporting Standard	+	n/a	+	n/a	n/a	+	n/a	+	n/a	++	+
Global Organic Textile Standard (GOTS)	++	++	++	--	+/-	++	+	++	++	++	+
GS Mark	+	+	+	+	--	+/-	++	+	+	+	++
International Faitrade Certification Mark	++	+	++	++	++	++	++	++	+	++	++
Label LUCIE	+	+	+	++	+	-	+	-	+	-	--
NF Mark/NF service	++	+	++	+	+	-	+	+	+	-	+
Renewable Energy Directive (RED) –Sustainability criteria for biofuels in Directive 2009/28/EC	+	+	+	--	++	+	+	--	++	++	+
Roundtable on Sustainable Palm Oil (RSPO)	++	++	++	+	+	+	+	++	+	--	-

Table 5: Scores justifications

Name	++ (higher reliability)	+	-	-- (lower reliability)
International verification standards	Certified compliance with one or several standards of the ISO 17000 series		No mention of any international verification standard	
Initial conformity assessment	The initial assessment includes documentary check, testing when relevant, audit, interviews, etc. The initial assessment also applies to the supply chain.	The initial assessment includes documentary checks. It can require an audit but the audit is not mandatory.	The initial assessment is only based on documentation.	There is no initial assessment.
Surveillance	Surveillance is undertaken every year with a complete analysis (similar to initial assessment).	Surveillance is undertaken every year with a simplified procedure.	There are surveillance activities only in case of suspicion.	There is no surveillance activity.
Intervention of a verifier	External and accredited verifier required.	External verifier required but not necessarily accredited.	Internal verifier required.	No requirement for a systematic intervention of a verifier.
Validity of the proof of compliance	The proof of compliance is valid for a limited and short time (e.g. one year).	The proof of compliance is valid for a limited, but longer time (e.g. 3 to 5 years).	The proof of compliance is valid until a case of non-compliance is identified.	
Flexibility	The standards are adapted to the type of products, the type of operators using the scheme (small producers, traders, etc.), the operators have a period to remedy instances of non-compliance. The verification procedure and its costs are adapted to the type of operators and their means (in terms of human or economic resources).	Several elements are flexible.	The standards, the cost, the verification procedure, the consequences in case of non-compliance are similar for every operator.	
Transparency	The standards, the verification guide and requirements, information on complaints and their resolution, the costs, the cases of misuse are available and highly transparent.	This information is partly available.	This information is not easily available.	The documentation is not publicly available.
Traceability	There is a considerable effort regarding traceability, records are kept for a defined time (more than 5 years), a control system for the verification of compliance and traceability is implemented along the supply chain.	Fewer efforts are required. The operator has to keep records but no other specific effort is made.	The management of traceability is insufficient with for instance little or no record-keeping requirements.	
Management of invisible characteristics	There is an in-depth verification of embedded/invisible impacts: the verification includes on-site inspection of supplier sites and interviews of stakeholders.	The operator has to provide documentation (contracts, invoices).	The operator only has to provide an attestation.	
Consequences of non-compliance and misuse	Misuse can lead to sanctions such as fines or prosecutions. The operator has to correct the non-compliance in a determined time frame.	Similar approach but in which fines or sanctions are less dissuasive.	There is no consequence.	
Governance	The scheme is developed and implemented by a multi-stakeholder organisation with various interests represented (e.g. NGOs, companies, associations, etc.).	The scheme is handled by public authorities or international institutions. Public consultation is carried out when updating requirements. The scheme is handled by a private institution verified by a third organisation.	The scheme is overseen by an organisation close to private interests, with no public consultation; or by a group of two companies; or each MS establishes its own verification process; or a company can create the standards for its sector.	The scheme is developed and managed by a private company with only corporate stakeholders.
Recognition	The label is internationally known and recognised to be reliable and credible.	The label is known at least at national level and known to be consistent.	The label is not known.	The label is known but its credibility is highly questioned.

3.4.4 Quantitative information related to the reliability of the compliance systems

This section aims to provide quantitative information related to the reliability of the existing compliance systems. Multiple factors have an effect on reliability (see section 3.4.2) and it is not possible in practice to evaluate reliability based on a single "reliability rate" indicator since the information necessary to build this indicator is not accessible (see section 3.4.1).

In order to overcome this methodological limitation, alternative pieces of information were sought. Scheme owners and certification bodies were contacted for that purpose. It appeared that a topic of interest for them is to understand the difficulties operators encounter to incorporate scheme requirements in their business. Available statistics on this aspect fall into two main categories:

- Statistics related to certification success rate;
- Statistics related to the nature and number of complaints.

It was considered that such statistics can provide an indirect view on reliability aspects. The entities that provided the information presented in this section are presented in Table 6.

Table 6 Metadata on information provided

Scheme	Source of information	Type of data	Geographical scope	Period
Fair Trade	Flo-Cert (certification body)	Conformity rates: percentage of audited companies Claims: occurrences	Global	2012
NF	AFNOR	Information for four types of certification: products, services, systems and persons Conformity rates and claims: number of occurrences for tens of thousands of audited companies	France	Average data per year
RSPO	RSPO	Conformity rates: occurrences f non-conformity per standard's principle Claims: occurrences	Indonesia, Malaysia and other country from Southern Asia	2008-2012 and 2012
MSC	MSC	Conformity rates: percentage of audited companies Claims: occurrences	Global	2008-2012
Organic farming label	A certification body	Conformity rates: occurrences of non-conformity Claims: occurrences	One EU country	2012
GOTS	A certification body	Conformity rates: percentage of audited companies Claims: occurrences	One EU country	2012

It should be noted that while in general verifiers have quantitative records regarding the outcomes of verifications they have performed (e.g. number and types of non-conformities, certification success rate, etc.) such information is not necessarily consolidated across the verifiers and made available to the scheme owner. For instance, FSC France indicated that this information is held by auditors. This explains why the number of entities that provided information is relatively limited and why some entities are verification bodies and not scheme owners.

Although the data provided do not give a definitive answer to the question "How reliable is a scheme?", they provide statistics on observed or alleged non-conformities in well-known and well-established

schemes whose reliability is perceived to be relatively satisfactory. Therefore, such statistics can give some indications of what can be expected for the development of a compliance system for PEF/OEF aiming at having a similar perceived reliability as FSC, Organic farming, etc.

The information gathered for the present study is reported in the following paragraphs. There are some data gaps in Table 7 and Table 8 since the type of information available differs across schemes.

Certification success rate

It appears that, among the schemes that provided statistics on this aspect, initial assessment and surveillance procedures mostly result in the awarding or renewal of the certificate. Indeed, very few companies fail to get or keep their certification: from less than 1% for the four NF certifications, Organic farming, GOTS, MSC and RSPO to 1.9% for Fair-trade. Failures occur mostly during surveillance. The reasons for de-certification include deadlines missed, no corrective measures provided, corrective measure not (correctly) implemented and objective evidence that corrective measures correctly implemented were not sufficient.

Although observed success rates are high, most of the operators undergoing a certification process have to provide corrective measures. This is the case for more than 80% of the verified companies. The share between minor and major corrective measures varies according the schemes. It seems that the share of major non-conformities is high for MSC and organic farming while the opposite is the case for other schemes. This observation is most likely due to strong differences between the schemes on aspects such as the nature of the requirements, the type of verification activities, how minor and major non-conformities are defined, etc.

For NF certifications, the rate of certification success without or with demand for the provision of minor or major corrective measures is not measured. The auditors believe that they do not need this information since all demands finally result in the awarding of the attestation.

Table 7: Certification success rate
Source: see Table 6

Indicator	Fairtrade[47]	NF[48]	MSC[49]	Organic farming	GOTS
Certification success rate without demand for the provision of corrective measures (certificate awarded immediately)	16%	n/a	10%[50]	n.a.	5%
Certification success rate with demand for the provision of corrective measures	39%	n/a	90%[51]	n/a[52]	20%
Rate of demand for the provision of major corrective measures	45%	n/a	1%	37%[53]	75%
Rate of non-awarding of certificate or withdrawal of certificate due to the lack of provision of corrective measures	1.9%	<1 °/00	~0[54]	0,5%[55]	1%

Available information for RSPO does not match the format of Table 7 but it is worth presenting. A 2013 study[56] looked at all of the non-conformities and "observations for improvement" for 114 audits performed between 2008 and 2012. The audits were analysed across the 8 RSPO principles from the global RSPO standard[57] and not by companies. Across all of the audits there were 1 819 non-conformities and observations of which 394 were major non-conformities, 674 were minor non-conformities and 751 were observations.

A certificate of compliance with the RSPO Criteria cannot be issued while any major non-conformities are outstanding. Major non-conformities raised during surveillance assessments must be addressed within 60 days or the certificate will be suspended. Major non-conformities not addressed within a further 60 days result in the certificate being withdrawn. Minor non-conformities are raised to major if they are not addressed by the following surveillance assessment.

[47] Data from 2012

[48] Average data per year for several tens of thousands

[49] ~50 fisheries certified in 2012-2013 (source: Marine Stewardship Council Annual Report 2012/13)

[50] Average data from 2008 to 2012 (15% in 2012)

[51] Average data from 2008 to 2012 (85% in 2012)

[52] Other information available about 20 000 minor non-conformities observed in 2012 for a total number of operators ~ 20 000 which are submitted to annual audits. Several non-conformities can be observed for the same operator.

[53] Approximate value. Information available: about 8 500 non-conformities observed in 2012 leading to pending certification

[54] Two occurrences in 2012

[55] Approximate value based on the number certificates withdrawn or suspended in 2012 (~100) and the number of operators (~20 000) which are submitted to annual audits

[56] Global Sustainability Associates, 2013. Analysis of RSPO certification and surveillance audit reports across Indonesia, Malaysia and the Rest of the World.
Available at: http://www.nbpol.com.pg/wp-content/uploads/downloads/2013/08/RSPO-Audit-Report_all-v7B.pdf.

[57] RSPO, 2007. RSPO Principles and Criteria for Sustainable Palm Oil Production

Complaints

Various types of complaints (in the broadest sense of the word) can be encountered. Terms employed vary across schemes and situations. For instance, there can be:

- Reclamations from the certified company relating to the manner in which the certification body provides its services;
- Appeals or objections which refers to a disagreement with the certification process decision (from the company being verified or any other actor);
- Allegations, which relates to complaints made by any party (e.g. NGOs, workers, consumers, etc.) against a certified operator which is considered to be violating the rules of the schemes.

All available statistics on complaints are presented in the table below.

Table 8: Number of complaints

Indicator	Fairtrade[58]	NF[59]	RSPO[60]	MSC[61]	Organic Farming	GOTS
Number of received complaints	61	2 to 25	48	39	119[62]	3[63]
Number of accepted complaints	29	2 to 25	40	26	n.a.	n.a
Number of complaints that led to a demand for the provision of corrective measures	n.a.	Up to 25 (100%)[64]	40	15 (57%)	n.a.	~0
Number of complaints that led to the withdrawal of the certificate	~0	n.a.	0[65]	1	n.a.	~0

In a number of schemes, once a complaint procedure is initiated, its admissibility is investigated. For Fairtrade, RSPO and MSC, more than two thirds of the complaints are deemed acceptable. Eventually, certification withdrawal after a complaint seems to be rare but is possible in theory for all certification

[58] Data from 2012 for complaints (in the sense of Fairtrade) + appeals + allegations.

[59] Average Data.

[60] Data complaint cases from 2009 to 2013. The RSPO complaints system can be used by all stakeholders, both RSPO members as well as non-members including affected communities, workers, other interested parties etc. For instance, the complaint system is used by NGOs to report on alleged violations of RSPO principles by RSPO members.

[61] Data presented here are for objections since the creation of the scheme (4 objections in 2013). The objections process is open to the client for the fishery or any parties that were previously involved in the fishery assessment process. The process is also available to any parties who feel that they were prevented from participating in the assessment process. In general, objections procedures are used by stakeholders, such as NGOs, that disagree with certification decisions (i.e. certificate given to an unsustainable fishery). See for instance: Christian, C. *et al.* (2013). A review of formal objections to Marine Stewardship Council fisheries certifications. Biological Conservation, 161, 10-17.

[62] Data for 2012. Reclamations received from operators (for ~20 000 operators)

[63] Data for 2012. Complaints received from operators (for ~100 operators). Complaints not linked to certification decision.

[64] Not measured for products, services and persons certification but systematic demand for the provision of corrective measures for systems certification

[65] From 2009 to 2013, two members were terminated due to complaints and one member left RSPO due to complaint. However, there was no case of certification withdrawal.

systems presented in Table 8. The possibility of reconsidering a decision is an important key to preserve the credibility of the systems.

Focus on Fairtrade

Regarding feedback received on the Fairtrade compliance system, FLO-CERT has a specific classification that distinguishes:

- Complaints – Complaints relate to the manner in which FLO-CERT provides services, including (but not limited to) failure to respond to certification relevant correspondence within a reasonable amount of time, or unprofessional behaviour by a FLO-CERT staff person or auditor.
- Allegation – An allegation is a statement by a third party against an operator holding a Fairtrade certificate claiming that the operator is non-compliant with applicable Fairtrade Standards. An allegation can be filed by any party, including a Fairtrade operator, an NGO, a labour union, a worker or a member of the public.
- Appeals – These are appeals against decisions taken by FLO-CERT to deny an application, not to certify an applicant, suspend a certificate or to decertify an operator. Appeals against certification decisions are decided by the Appeals Committee.

In 2012, 12 complaints, 12 appeals and 37 allegations were submitted to FLO-CERT. Four out of 12 appeals were granted in 2012 leading to a change in the certification decision, 29 out of 37 allegations were acknowledged by FLO-CERT and investigated. All complaints were investigated and led to a number of corrective measures internally, on the training of auditors or other measures. No cases directly led to the withdrawal of a certificate.

Conclusions

As regards certification success rate, it appears that a high success rate is commonly observed. This can be explained by the attitude adopted by the scheme owners and verifiers towards operators: verification controls can be performed in the spirit of learning and continuous improvement, aiming at improving operator practices and giving time to take into account observations made by verifiers.

As regards complaints, it appears that de-certification due to a complaint remains rare. Complaints procedures initiated by third parties appear to have relatively limited overall impact on de-certification but they are essential for the scheme's credibility and transparency.

Chapter 4. Relevant WTO rules for compliance systems

In this section an analysis of the international trade rules and their relevance for PEF/OEF compliance systems is performed. This analysis includes a presentation of the main WTO legal rules of relevance for the schemes listed in Table 1 and their related compliance systems, as well as a discussion on the applicability of such WTO rules to these schemes and to future possible EU policies relating to PEF/OEF methodologies and declarations.

In this context, it is worth recalling the definition of a compliance system presented in section 2.1:

> *"A compliance system can be seen as a set of mechanisms aiming at providing confidence in a given scheme to users or other target individuals or organisations.*
>
> *A compliance system is designed to verify that an "object" (i.e. product, service, or organisation) is conforming to a specified rule, such as a standard or a law. It helps to ensure that the object delivers on its promises. This involves carrying out verifications activities based on methods, procedures, and tools in order to provide reassurance that the requirements are met."*

As also described in section 2.1, a compliance system relies on particular means to demonstrate that requirements are fulfilled. These means are (initial) conformity assessment and surveillance (including market surveillance).

WTO rules obviously apply to the PEF/OEF schemes in their entirety, in principle. However, what is investigated here is *not* the WTO compatibility of the underlying PEF/OEF methodological requirements as such. The focus is on WTO rules of relevance specifically for compliance systems, even though both aspects cannot always be completely separated from each other for purposes of a legal analysis.

Before starting the legal analysis, it should be clarified to which characteristics of a product or an organisation the rules for which compliance is assessed through the compliance system relate.

- As mentioned in section 2.1, a PEF does not solely relate to physical characteristics of the final product assessed (e.g. bill of materials, electricity consumption during use phase), but also to certain "embedded" environmental impacts related for instance to the production processes (e.g. CO_2 emissions coming from fossil energy use during manufacturing, land-use in the production of agricultural products) or the end-of-life (e.g. emissions to the air or the soil in landfills).
- Similarly, an OEF is a multi-criteria measure of the environmental performance associated with the activities (product/service provision) of an organisation, from a life cycle perspective. This includes direct activities and impacts (impacts from sources that are owned and/or operated by the Organisation, i.e. from site-level activities) and indirectly attributable upstream/downstream activities. The indirect impacts of upstream/downstream activities include the use of materials, energy and emissions associated with goods/services sourced from upstream/occurring downstream of the organisational boundary (e.g. production

of purchased electricity, production of purchased materials, end-of-life treatment of goods/services provided).

This section is structured as follows: In the first part (section 4.1), relevant definitions contained in WTO law and the applicability of WTO law to PEF/OEF schemes will be described. This is followed by presentation of the most relevant rules of the two important agreements, the Agreement on Technical Barriers to Trade (TBT Agreement) (section 4.2) and the General Agreement on Tariffs and Trade (GATT) (section 4.3). In an additional section, the different policy options that the EU could pursue in the area of PEF/OEF as identified in the Impact Assessment carried out by the European Commission and their relevance under WTO law are discussed in broad terms (section 4.4). Finally, conclusions are presented.

4.1 WTO definitions and applicable law

4.1.1 Compliance systems and conformity assessments – a note on WTO terminology and the terminology used in this study

Before starting the actual legal analysis, it is useful to clarify how the terminology used in the present study is related to the terminology of WTO law. WTO law does not contain the term "compliance system". However, the Agreement on Technical Barriers to Trade (TBT) contains various articles relating to conformity assessments. "Conformity assessment procedures" are defined in Annex 1.3 TBT Agreement as

> *"Any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled."*
>
> *"Conformity assessment procedures include, inter alia, procedures for sampling, testing and inspection; evaluation, verification and assurance of conformity; registration, accreditation and approval as well as their combinations."*

This definition does not explicitly say whether a conformity assessment would take place before the placing of a product on the market or after, and whether it would include continued market surveillance activities.

4.1.2 Scope of WTO law

WTO law, like all international law, is primarily directed at states. Conversely, WTO law is not addressed at private actors, either individuals or legal persons, and does not contain any direct obligations for them. Thus, any private scheme laying down requirements for products or organisation, but not linked to mandatory legal rules is not subject to any specific WTO obligations;[66] this applies by extension to compliance systems that are part of such schemes. WTO

[66] Jill E. Hobbs, "Public and Private Standards for Food Safety and Quality: International Trade Implications," *eJADE: Electronic Journal of Agricultural and Development Economics* 11, no. 1 (2010): 148, http://ideas.repec.org/a/ags/ejadef/90586.html; l Robert Wolfe, Shane Baddeley, and Peter Cheng, *Trade Policy*

Members only have some obligations to take certain reasonable measures with the aim of ensuring that (non-mandatory) standards by non-government bodies fulfil certain of the requirements of the TBT Agreement.

Examples of purely private, non-mandatory product-related schemes reviewed in Chapter 3 and Annex 2 and outside of the scope of WTO law are, among other, the Product carbon footprint of the Carbon Trust, the Product Life Cycle Accounting and Reporting Standard of the GHG Protocol, the Fair Trade Label, the NF and GS marks, the Blue Angel, the FSC and MSC labels, the Green Seal. Examples of organisation-oriented, private, non-mandatory schemes are the Corporate carbon footprint of the Carbon Trust, the Corporate Accounting and Reporting Standard of the GHG Protocol, the LUCIE label. Such schemes are not covered by WTO law.

Concerning organisation-oriented schemes, it should further be noted that WTO law is trade law, i.e. it only governs – broadly conceived – trade related matters. Thus, legal rules on the existence or way of measuring and verifying a declaration related to an organisation-oriented scheme (e.g. OEF, or corporate GHG reporting scheme, or RSE label such as LUCIE), in the framework of measures adopted by the EU only have any legal implications under WTO law if the measures also cover trade-related aspects. This would be the case, for example, if only organisations disclosing their OEF-profile (i.e. the results of an OEF study) were allowed to make investments in the EU or import certain products into the EU. However, so far no such rules exist in EU law for OEF. The focus in the following section 4.1.3 as well as in sections 4.2 and 4.3 will consequently be on PEF.

4.1.3 Relevant WTO agreements

The WTO legal order consists of a considerable number individual agreements that are all under the WTO roof. The most relevant for the disclosure and communication of PEF-profiles (and hence for the present context) are the following[67]:

- The **Agreement on Technical Barriers to Trade** (TBT) regulates the preparation, adoption, and application of (mandatory) technical regulations and (voluntary) standards.
- The **Agreement on Sanitary and Phytosanitary Measures** (SPS) is in many respects similar to the TBT; it relates, according to its Art. 1.1 to "all sanitary and phytosanitary measures which may, directly or indirectly, affect international trade". Sanitary and phytosanitary measures are, as can be inferred from Art. 2.1 SPS, measures aimed at the protection of human, animal or plant life or health.
- The **General Agreement on Tariffs and Trade** (GATT) deals with measures having an impact on the transboundary trade in goods.

Generally, more than one of these agreements may be of relevance to a specific measure; in fact, their scope of application is not mutually exclusive. The Note to Annex 1A to the WTO Agreement stipulates that the TBT Agreement and the SPS Agreements shall prevail over GATT in the case of a conflict between either of them and the GATT. However, it is difficult to identify an explicit conflict

Implications of Carbon Labels on Food, SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, February 28, 2012), 76, http://papers.ssrn.com/abstract=2014789.

[67] See for example Wolfe, Baddeley, and Cheng, *Trade Policy Implications of Carbon Labels on Food*, 71ff.

between these agreements; rather they could be seen as complementary. In the absence of such conflict, the WTO case law so far indicates that both the TBT and GATT are applicable to a given measure, and the same would apply to SPS and GATT. However, as shown below, the TBT Agreement is the more specific agreement when it comes to compliance systems. A WTO dispute settlement body would therefore probably assess related measures first under the TBT and only after this under the GATT[68]. However, this does not mean that only the TBT is applicable.

By contrast, the TBT and the SPS Agreement do not apply to the same measure; the SPS is the more specific agreement in that whatever standard or regulation is adopted with a view to sanitary or phytosanitary purposes will be assessed under the SPS Agreement and not the TBT Agreement.

As the present study is concerned with conformity assessments of statements on the environmental performance of products (and organisations) and not measures taken for health objectives, we will, in the following, discuss the TBT Agreement and the GATT.

4.2 Agreement on Technical Barriers to Trade (TBT)

4.2.1 Basic structure

The TBT applies to technical regulations and standards. Both terms are defined in the agreement. According to Annex 1.1 TBT, a technical regulation is a

> *„[d]ocument which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method".*

According to Annex 1.2 TBT, a standard is a

> *"[d]ocument approved by a recognised body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method".*

The difference between both definitions is the mandatory character of the respective document. Technical regulations are mandatory, standards are not.

The different categories of schemes and their basic categorisation under WTO law are evident from the following table:

[68] See Koebele, in Wolfrum, Rüdiger/Peter-Tobias Stoll/Anja Seibert Fohr, WTO: technical barriers and SPS measures, Martinus Nijhoff Publishers, 2007, p. 183.

Table 9: Status of PEF/OEF rules under WTO law

	Voluntary	Mandatory
Public[69]	Covered by WTO law, "**standard**" in the sense of the TBT Agreement	Covered by WTO law, "**technical regulation**" in the sense of the TBT Agreement
Private	Not covered by WTO law	Not applicable as private actors cannot set any mandatory rules

Hence, a document adopted by the competent bodies of the EU, setting forth e.g. which requirements a certain product needs to fulfil to bear a certain label on its environmental footprint or what methodology would have to be used for this end would – depending on its voluntary or mandatory nature – be either a technical regulation or a standard.

However, it has been observed that the distinction between voluntary and mandatory in the TBT Agreement is rather unclear[70]. With regard to the voluntary/mandatory distinction, the following different types of schemes can be distinguished:

- **Type 1:** A (public) scheme that business actors can use, but whose use is not mandatory, which merely assists them and which confers no legally regulated benefits whatsoever.
- **Type 2**: A (public) scheme that introduces no binding requirements for everyone, but requires business to comply with specific requirements if they want to obtain a certain benefit, e.g. being able to use a certain label or display certain environmental information.
- **Type 3**: Binding legislation that obliges business actors to comply with certain mandatory requirements, for example that every product has to display certain information related to its environmental performance in order to be marketed within the EU.

Type 1 measures are clearly voluntary in nature, and would thus be a "standard" according to the TBT, provided that the other requirements for a standard in Annex 1, para. 2 TBT are also fulfilled. Type 3 measures are, in turn, clearly mandatory and therefore a "technical regulation" in TBT terminology. The categorisation of Type 2 measures is more difficult.

In the relatively recent *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products* case, the Appellate Body[71] of the WTO had to decide on a "dolphin-safe" US labelling scheme[72]. Tuna importers could use the label "dolphin safe" under certain conditions that were set out in a US regulatory, legislative act, but were not required to do so as a precondition for

[69] "Public" here means adopted by a state entity, including central governments, local authorities, central standardising bodies.

[70] Wolfe, Robert, Shane Baddeley, and Peter Cheng. *Trade Policy Implications of Carbon Labels on Food*. SSRN Scholarly Paper. Rochester, NY: Social Science Research Network, February 28, 2012. http://papers.ssrn.com/abstract=2014789, p. 72

[71] The WTO has a two-instance dispute settlement system. The Appellate Body is the revision instance. For more information, see http://www.wto.org/english/thewto_e/whatis_e/tif_e/disp1_e.htm

[72] United States — Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R (Appellate Body 2012), http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds381_e.htm

exporting their tuna to the US. However, they were forbidden from making any claims related to the well-being of dolphins on their tuna products other than using the label. Hence, as the Appellate Body concluded, the US regulation "establishes a single and legally mandated set of requirements for making any statement with respect to the broad subject of "dolphin-safety" of tuna products in the United States"[73]. Moreover, the measure at issue also contained surveillance mechanisms to ensure compliance with its norms. These features led the Appellate Body to conclude that the measure at issue was indeed mandatory, and hence a "technical regulation" under the TBT Agreement[74]. Concerning PEF, this implies that at least such regulatory measures that do not force economic operators to disclose and communicate a PEF-profile (i.e. the results of a PEF study) of their products in a certain way, but only allow them to make certain claims related to their products' environmental footprint if they use the EU PEF scheme (including its compliance system), would have to be considered a technical regulation under the TBT Agreement.

In the following, the rules applying to (mandatory) technical regulations and (non-mandatory) standards are described in turn.

4.2.2 Rules applicable to technical regulations

The following rules of the TBT Agreement apply specifically to technical regulations.

Art. 2 TBT contains obligations directed at WTO Members concerning the adoption of technical regulations.

4.2.2.1 Technical Barriers to Trade – Art. 2.1 on "like" products

The first one is that imported like products be treated no less favourably than domestic products (**Art. 2.1 TBT**). Speaking less technically, the article stipulates that there must be no discrimination between domestic and foreign suppliers. Whether two products are "like" in the sense of WTO law is routinely determined by four criteria in WTO dispute settlement[75]:

- Physical properties of the products;
- Extent to which the products are capable of serving the same or similar end-uses;
- Extent to which consumers perceive and treat the products as alternative means of performing particular functions in order to satisfy a particular want or demand; and
- International classification of the products for tariff purposes.

In addition to these concrete criteria, the competitive relationship between the domestic and imported product is another criterion to determine whether two products are alike or not. The WTO

[73] United States — Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R (Appellate Body 2012), para. 193.

[74] United States — Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/AB/R (Appellate Body 2012), para. 199.

[75] The first case in which this was recognised was *Japan – Taxes on Alcoholic Beverages,* WT/DS8/AB/R, WT/DS9/AB/R, WT/DS10/AB/R; for a later case see for example Appellate Body Report, EC – Asbestos, para. 102.

dispute settlement bodies stress that whether two products are like can only be assessed on a case-by-case basis[76].

When two products are subject to a life cycle-assessment, they will often not be different with regard to their physical characteristics, their end-uses or international tariff classification. For example, how much CO_2 emissions were generated or how much water was used in the production of, e.g. a certain technical device, will routinely not impact the physical properties, the end-use or the international tariff classification for a product with a "lighter" and a "heavier" environmental footprint. Thus, the only criterion that could normally make two products "unlike" is consumer perception[77]; indeed, PEF information on a product is precisely aimed at creating a consumer preference for the more environmentally-friendly product.

Whether or not a difference concerning a single of the above criteria suffices to make an otherwise identical or nearly identical product with a "lighter" and a "heavier" footprint "unlike" is a question that the WTO dispute settlement bodies have not had to decide so far. In the *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, the Panel decided that Mexican tuna products (which were often not "dolphin-safe") and other tuna products (often "dolphin-safe") were "like", even though consumers might have different preferences concerning the two sets of products. The Panel argued that the relevant groups of products to be compared were ultimately not "dolphin-safe" on the one hand and "dolphin-un-safe" products on the other, but products of different origins. However, not all Mexican tuna dolphin was "dolphin un-safe" and all US tuna dolphin safe. Thus, the differences in consumer perception were not related to the origin of the product[78]. The Appellate Body did not have to decide on this matter. However, it appears, against the background of this Panel decision, more likely that two products that are identical with the exception of their environmental footprint will have to be considered "like products" in WTO law than the opposite.

4.2.2.2 Technical Barriers to Trade – Art. 2.2 on the "necessity" of the technical regulation

A second requirement of the TBT Agreement is that technical regulations not be more trade-restrictive than necessary to attain certain regulatory objectives such as protecting the environment (**Art. 2.2 TBT).** The "necessity" requirement is also contained in various other WTO norms, e.g. in Art. XX GATT, and there is a considerable amount of jurisprudence on it. What is "necessary" can only be judged on a case-by-case basis. However, it has been established in WTO case law, that a measure is only "necessary" if no less trade-restrictive, but equally effective alternative measure is available. Concerning the terms "necessary" and "unnecessary" in Art. 2.2 TBT the Appellate Body in *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products* quoted the finding in *China – Publications and Audiovisual Products* (on Art. XX GATT) that there was

[76] European Communities — Measures Affecting Asbestos and Products Containing Asbestos, WT/DS135/R, 8.114 (Panel 2000), para. 8.114.

[77] This point was, indeed, made by the EU in a third-party submission in the Mexico-Tuna case, see para. 7.248 of the Panel report.

[78] United States — Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products, WT/DS381/R, 7.250 (Panel 2011).

a range of degrees of necessity[79]. It concluded that in the context of Art. 2.2 TBT the factors that must be "evaluated" are the trade-restrictiveness of the technical regulation, the degree of contribution a measure makes to the achievement of a legitimate objective and the nature of risks and gravity of consequences that non-fulfilment of the objectives pursued would create[80]. The Appellate Body then went on to clarify that the necessity analysis would

> *"[in] most cases … involve a comparison of the trade-restrictiveness and the degree of achievement of the objective by the measure at issue with that of possible alternative measures that may be reasonably available and less trade restrictive than the challenged measure, taking account of the risks non-fulfilment would create."*[81] *[footnote omitted]*

The above findings were quoted and re-iterated by the Appellate Body in *United States – COOL Requirements*[82]. In this case, the Appellate Body also reversed the Panel's finding that a certain measure was not consistent with Art. 2.2 TBT Agreement, because it "fell short" of the legitimate objective; the Appellate Body rejected this finding, stating that there was no "threshold" that a measure needed to fulfil under Art. 2.2 TBT. Rather, a Panel needed to ascertain "the degree of contribution achieved by the measure."[83] The Appellate Body in this case found that the measure at issue

> *"makes some contribution to the objective of providing consumers with information on origin; that it has a considerable degree of trade-restrictiveness; and that the consequences that may arise from non-fulfilment of the objective would not be particularly grave."*[84]

It then proceeded to compare this situation to four alternative measures proposed by one of the complainants, but concluded that it was ultimately not in a position to conclude this analysis, as the Panel had not clarified the factual basis for such a finding[85]. All in all, if there are two options for PEF, the above factors would have to be compared, and the WTO dispute settlement would then arrive at a finding on whether an alternative measure than the one in place should have been chosen.

4.2.2.3 Technical Barriers to Trade – Other relevant articles

There is an obligation to use existing international standards as a basis for national technical regulations (**Art. 2.4 TBT**).

With regard to technical regulations that are not adopted by central governments, but at the local level or by non-state actors, **Art. 3.1** mandates that WTO Members shall take "reasonable measures" to ensure compliance by such entities with Art. 2 TBT. Thus, there is no direct obligation for private actors to comply with the rules of Art. 2 TBT. Moreover, the fact that WTO Member States are only obliged to take "reasonable measures" means that they have not obligation to

[79] Ibid., para. 318.

[80] Ibid., para. 318, 322.

[81] Ibid.

[82] United States — Certain Country of Origin Labelling (COOL) Requirements, WT/DS384/AB/R, 374–378, 461, 471 (Appellate Body 2012), para. 374–378, 461, 471.

[83] Ibid., para. 468.

[84] Ibid., para. 479.

[85] Ibid., para. 480–491.

ensure that all actors other than entities of the central state act at all times in complete compliance with the obligations contained in Art. 2 TBT.

The TBT Agreement contains various articles relating to **conformity assessment procedures**, none of which seems to have played a role in WTO dispute settlement so far[86]. The following are the most important ones:

Article 5.1 TBT sets forth rules on the assessment of conformity with both technical regulations and standards by central government bodies. In the EU, such central government bodies could either be located at EU level or at Member State level. Accordingly, Members must ensure that:

> *"conformity assessment procedures are prepared, adopted and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation… " (Art. 5.1.1 TBT).*
>
> *"conformity assessment procedures are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. This means, inter alia, that conformity assessment procedures shall not be more strict or be applied more strictly than is necessary to give the importing Member adequate confidence that products conform with the applicable technical regulations or standards, taking account of the risks non-conformity would create…" (Art. 5.1.2 TBT).*

These two provisions mirror Art 2.1 and 2.2 TBT with regard to conformity assessments. While none of them has been discussed in WTO dispute settlement so far, it is likely that some of the above interpretations would be used by WTO dispute settlement bodies when interpreting them.

Art. **5.2 TBT** contains certain **procedural requirements** for conformity assessment procedures of central government bodies, relating to non-discrimination, transparency and efficiency in communication with the applicant, confidentiality of information submitted, equity of fees charged, existence of a complaint procedure and avoidance of unnecessary burdens for the applicant.

Art. 5.4 TBT sets forth that existing or imminent **international standards** (e.g. those set by the International Standardising Organisation ISO) are used as a basis for conformity assessments, except where "…. such guides or recommendations or relevant parts are inappropriate for the Members concerned, for, *inter alia*, such reasons as: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment; fundamental climatic or other geographical factors; fundamental technological or infrastructural problems".

Art. 5.6 – 5.9 TBT contain **publication and notification requirements** concerning conformity assessment procedures.

Art. 6 TBT regulates the **mutual recognition of conformity assessments** procedures conducted by WTO members.

The basic rule is contained in Art. 6.1 TBT, according to which Members shall

> *"ensure, whenever possible, that results of conformity assessment procedures in other Members are accepted, even when those procedures differ from their own, provided they are satisfied that those*

[86] See WTO Analytical Annex, TBT Agreement, http://www.wto.org/english/res_e/booksp_e/analytic_index_e/tbt_e.htm#article5

procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures."

The clause "whenever possible" indicates that this is not an unconditional obligation for WTO Members; there can be situations where a Member may argue that such mutual recognition is not possible. The remaining paragraphs in Art. 6 encourage WTO Members to engage in various forms of cooperation with the aim of achieving mutual recognition of conformity assessment procedures.

Art. 7 TBT and **8 TBT** define obligations of WTO Members in relation to **conformity assessments conducted by local government bodies and non-governmental bodies** respectively. Basically, WTO Members must take reasonable, available measures to ensure that those entities comply with the obligations defined in Art. 5 and 6 TBT. Art. 8.2 TBT stipulates, in addition, that WTO Members shall only rely on conformity assessments by non-governmental actors, if the non-governmental actors fulfil these obligations.

Article 10 stipulates that WTO Members must have an **inquiry point** that can provide all kinds of information about TBT-related matters, including conformity assessment procedures. Within the EU, the TBT Inquiry Point is TBT Enquiry DG Enterprise and Industry[87].

While these rules are quite detailed, conformity assessments have been the subject of intensive debate among WTO Members in the competent TBT Committee[88]. This indicates that conformity assessments in practice create significant problems for economic actors.

Box 1 – The WTO case on Tuna Labelling – an example

The WTO dispute settlement has so far not had to decide many cases on the kind of schemes discussed in this study. One exception is the aforementioned case *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*[89]. The case is presented in this box to illustrate how the WTO dispute settlement bodies might deal with binding PEF-related legislation.

The case was about binding federal US legislation establishing the conditions for the use of a "dolphin-safe" label on tuna products within the US, which Mexico challenged[90]. The relevant legal act, the Dolphin Protection Consumer Information Act, implementing regulations, and a related court case set out the requirements for when tuna products sold in the United States could be labelled as "dolphin-safe". The legislation did not make the importation of tuna into the US dependent on whether tuna carried the dolphin-safe label. At the same time, the legislation prohibited any reference to dolphins, porpoises, or marine mammals on the label of a tuna product, if the tuna contained in the product did not comply with the conditions set out in the legislation.

The conditions that needed to be fulfilled for the use of the label varied according to where the tuna was caught, the type of vessel and the fishing method. Basically, however, they revolved around the necessity for the captain and/or an observer to provide a certificate that certain methods of catching the tuna were not used and/or that no dolphins were killed or seriously injured when the tuna was caught. The latter was only required when certain methods of catching tuna were used. In sum, the use of the label was contingent of a certain "production" method. The US measures also provided for specific enforcement mechanisms by state authorities.

The case was initially decided by a WTO Panel. However, the parties appealed and subsequently the

[87] See http://ec.europa.eu/enterprise/tbt/index.cfm?fuseaction=Links.viewContact&dspLang=EN

[88] See for example Committee on Technical Barriers to Trade, Sixth triennial review of the operation and implementation of the Agreement on Technical Barriers to Trade under Article 15.4, g/tbt/32, 29 November 2012, para. 5ff.

[89] The documents related to the case are all online at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds381_e.htm

[90] The following description of the measures is summarised from the Appellate Body Report, WT/DS381/AB/R, 12 May 2012, paras. 172ff.

Appellate Body of the WTO decided, in a report extending over more than 170 pages, the following:

- The measure at issued constituted a technical regulation in the sense of the TBT Agreement (rather than a non-mandatory standard). Even though the use of the "dolphin-safe" label as such was not a pre-condition for importing or marketing tuna products in the US, the legislation set forth that if the conditions for use of that label were not fulfilled, no claim whatsoever relating to the "dolphin-safety" of the project could be made. Thus the US measure covered the entire field of what "dolphin-safe" meant in relation to tuna products.
- The legislation violated Art. 2.1 TBT Agreement, which forbids treating imported products less favourable than domestic like products. The Panel in the case had determined that imported and domestic tuna products were "like", a finding not appealed by any of the parties. The Appellate Body hence only had to decide on whether the imported products were being discriminated against. The Appellate Body noted that this called for an analysis of "whether the contested measure modifies the conditions of competition to the detriment of imported products". In this regard, the Panel in the case had established that while most tuna caught in a certain area by US vessels complied with the conditions set out in the US regulations, most tuna caught by Mexican vessels did not. The Appellate Body observed that under these conditions, even though the ultimate purchasing decision was made by consumers, access to the label constituted an advantage accorded unequally to US and Mexican tuna through a state measure; this measure thus modified the competitive conditions between both. The Appellate Body further observed that the measure treated different methods of catching tuna differently; for the methods used predominantly by Mexican vessels the US measure fully addressed the adverse effects on dolphins, whereas it did not address mortality arising from other fishing methods to the same extent. Thus, the requirements that needed to be mostly fulfilled by Mexican tuna before being able to use the label were more difficult to fulfill than the ones most US tuna had to comply with. The Appellate Body could not find a scientific or factual justification for this distinction; accordingly it observed that these differences were not based on a legitimate regulatory distinction, and hence discriminatory. Thus, Art. 2.1 TBT was violated.
- The Appellate Body reversed the Panel's finding that the legislation violated Art.2.2 TBT which requires technical regulations not to be more trade-restrictive than necessary for the fulfillment of certain policy objectives. The Panel had identified dolphin protection as well consumer protection against misinformation as objectives of the measure. The Appellate Body had to decide on whether the Panel had erred in finding that the measures were not necessary to these ends. In line with established case law, the Appellate Body looked at the degree of contribution made by the measure to the legitimate objectives at issue, the trade-restrictiveness of the measure, and the nature of the risks at issue and the gravity of consequences that would arise from non-fulfillment of the objective(s) pursued by the Member through the measure, undertaking a comparison between the challenged measure and possible alternative measures. The Appellate Body noted in this regard that the Panel incorrectly assumed that an alternative measure suggested by Mexico would have contributed to the fulfillment of the US's objectives to the same degree as the measure in place. It therefore reversed the Panel's findings that Art. 2.2 TBT has been breached.
- Finally, the Appellate Body also had to deal with Art. 2.4 TBT, which obliges WTO Members to base technical regulations on relevant international standards, adopted by an "international standardizing body". The Appellate Body had to decide, in this context, whether the Agreement on the International Dolphin Conservation Program (AIDCP), a multilateral agreement had to be considered a relevant international standard in the sense of the TBT Agreement. The AIDCP contained rules differing from the US measure, and had been ratified by the US. The Appellate Body found that the AIDCP did not qualify as "standardizing body" in the sense of the TBT; it was not open to all WTO Members, as required by the TBT Agreement. Thus, no violation of Art. 2.4 TBT was found.

Thus, ultimately only a violation of Art. 2.1 TBT was found and the US was asked to bring its measure into conformity with WTO law.

4.2.3 Rules applicable to standards

For (non-mandatory) standards, Art. 4 TBT contains an obligation for WTO Members to

> *"ensure that their central government standardizing bodies accept and comply with the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex 3 to this*

> *Agreement (referred to in this Agreement as the "Code of Good Practice"). They shall take such reasonable measures as may be available to them to ensure that local government and non-governmental standardizing bodies within their territories, as well as regional standardizing bodies of which they or one or more bodies within their territories are members, accept and comply with this Code of Good Practice."*

Within the EU, the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the European Telecommunications Standards Institute (ETSI) are standardizing bodies in the sense above; they have been assigned this function by Art. 2(8) in conjunction with Annex 1 of Regulation No. 1025/2012 of 25 October 2012 on European standardization[91]. These organisations have all accepted the WTO Code of Good Practice. In addition, all member States have notified the acceptance of the Code by one or more of their national standardizing organisation to the WTO[92].

The Code of Good Practice in Annex 3 TBT contains obligations that are almost identical to the obligations concerning technical regulations in Art. 2 TBT.

The most important rules contained in the Code are the following:

Art. D Code of Good Practice is identical to Art. 2.1 TBT, i.e. it contains a non-discrimination rule in the form of the requirement that imported like products are treated no less favourably than domestic products.

Art. E Code of Good Practice repeats the first part of Art. 2.2 TBT, i.e. contains a requirement that standards do not create unnecessary obstacles to international trade.

Art. F Code of Good Practice is similar to Art. 2.4 TBT, i.e. contains a requirement to use existing international standards as basis for technical standards, except where such international standards or relevant parts would be ineffective or inappropriate.

Moreover, the rules in Art. 5 TBT on conformity assessments also apply to standards when the conformity assessment is conducted by "central government bodies".

Thus, the WTO rules technical regulations and standards are very similar in wording, and it is thus most likely that the WTO dispute settlement bodies would interpret them in a similar way, even though so far the rules on standards have hardly played a role in WTO dispute settlement.

4.2.4 Scope of application of the TBT Agreement

Finally, it should mentioned that there has been a controversy about whether the TBT only applies to product-related measures, i.e. measures that relate to the immediate characteristics of a certain product only (e.g. its energy efficiency or genetic modification) or also to non-product related process and production method (PPM) measures. Non-product related PPM measures relate to events during the production of a product (e.g. carbon emissions caused during its production)

[91] Official Journal of the European Union, L 316 of 14 November 2012, p. 12-33

[92] Trade policy review - Report by the WTO Secretariat - European Union, WT/TPR/S/248, para. 97.

which do not influence the characteristics of the final product as such. Some have argued that the TBT should be narrowly interpreted to only cover product -related environmental measures[93].

However, in the recent *United States - Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products* case, the WTO's Appellate Body decided that the rules on the use of the label "dolphin-safe" represented a technical regulation in line with Annex 1.1 TBT (see above, section 4.2.1). As the label "dolphin-safe" related to the way that tuna was caught (and not to its physical properties), this implies a rejection of the above, narrow reading of the TBT as only covering product-related measures that relate to the physical characteristics and the performance of a product.

4.3 General Agreement on Tariffs and Trade (GATT)

The other relevant agreement concerning environmental labelling rules is GATT, in particular its Art. III:4 which states:

> *"The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use."*

This article is similar to Art. 2.1 TBT as it prohibits the unequal treatment of "like" products. Therefore, the above discussion on "like products" is of relevance for Art. III:4 GATT as well. Different from the TBT Agreement, Art. III:4 GATT does not relate specifically to a certain type of measure, either mandatory or voluntary in character. "Less favourable treatment" of imported versus domestic products could, in principle, also consist in a factual behaviour. For example, in the case on *EC — Approval and Marketing of Biotech Products,* the Panel implied that a non-consideration of applications by GMO importers for the approval of their products could be considered as "treatment" in the sense of this clause[94]. Thus, for conformity assessment this means that Art. III:4 GATT could also forbid a certain manner of how conformity assessments are applied, rather than the rules governing them.

One difference between the GATT and the TBT is, however, that even if a measure violates Art. III:4 GATT, it may still be justified. The relevant norm is Art. XX GATT. It allows WTO members to take, inter alia, measures that are "necessary to protect human, animal or plant life or health" (Art. XX b) or "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption" (Art. XX g). In addition, these measures must be non-discriminatory and must not constitute a disguised restriction on international trade. With regard to environmental consumer information like the information on a product's environmental performance, the question is hence whether there is a sufficient link

[93] For an overview of the debate see Vranes, Erich, 2010, Climate Labelling and the WTO - The 2010 EU Ecolabelling Programme as a Test Case under WTO Law, http://ssrn.com/abstract=1567432; Joshi, Manoj, 2004, Are Eco-Labels Consistent with World Trade Organization Agreements?, Journal of World Trade Vol. 38:1, p. 69-92

[94] Panel Report, EC — Approval and Marketing of Biotech Products, paras. 7.2513–7.2516

between the information and the protection of exhaustible natural resources[95] or whether the information is necessary for the protection of human, animal or plant life or health (e.g., because biodiversity-related information is provided).

4.4 Link with possible PEF/OEF policies

In a Commission impact assessment accompanying the Communication "Building the Single Market for Green Products: Facilitating better information on the environmental performance of products and organisations"[96], five policy options for the EU in the area of green products were presented. In the following, we will briefly discuss which of the above WTO rules they would have to comply with respectively.

Option 1: Baseline scenario – continuation of status quo

The first of the policy option discuss is a continuation of the status quo, which is described in the study as ongoing implementation of the existing policy instruments introduced or strengthened by the SCP/SIP Action Plan. In the area of products the Ecodesign directive, the Energy label, the EU Ecolabel, Energy Star, and green public procurement would be implemented. As this scenario does not involve any legislative changes that could require a new assessment under WTO law, it is not further discussed here.

Option 2: New mandatory product policy framework

The second policy option would be the introduction of a new mandatory product policy framework. The new legal framework would introduce requirements concerning product environmental performance, including setting minimum market access requirements. As described above, such binding legislation relating to products would have to be considered a technical regulation under the TBT Agreement. Hence, the rules discussed in Section 4.2.2 and Art. III:4 GATT would have to guide such legislation.

Option 3: A mandatory OEF reporting framework

Under this option, the use of a certain OEF methodology would become obligatory for large organisations in priority sectors for reporting/information provision purposes. The policy would provide incentives at EU and/or Member State level to improve performance or to reward good performance, based on reliable, quantified information provided through the OEF and OEFSRs. A dialogue on incentive frameworks will be established with Member States to improve approaches to incentives and avoid environmentally harmful subsidies. In such a framework, the assessment under WTO law would depend a lot on the details of the rules. The described rules do not seem to, *prima*

[95] For example, clean air was recognised as an exhaustible natural resource by the WTO dispute settlement in the case United States — Standards for Reformulated and Conventional Gasoline, (WT/DS2/AB/R), available at: http://www.wto.org/english/tratop_e/envir_e/gas1_e.htm

[96] Commission staff working document – Impact assessment accompanying the document: Communication from the Commission to the European Parliament and the Council - Building the Single Market for Green Products: Facilitating better information on the environmental performance of products and organisations (COM(2013) 196 final), 9 April 2013, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2013:0111:FIN:EN:PDF

facie, be relevant under the TBT Agreement or GATT as they do not relate to the transboundary trade in goods.

Such measures may become relevant under the Agreement on Trade-Related Investment Measures (TRIMs) if they have a link with trade. Art. 1 TRIMS states that the agreement applies to "investment measures related to trade in goods only". A typical example given in an Annex to the TRIMS-Agreement would be, for example, a requirement for a company to purchase or use products of domestic origin. However, a mere requirement to report on OEF is not product-related. Thus, TRIMS would not apply either. This might change if, for example, only companies holding an OEF could import certain products to the EU.

If subsidies provided e.g. for good performance of OEF were to be contained in the OEF reporting framework, it may also have to be assessed under the Agreement on Subsidies and Countervailing Measures (SCM) of the WTO.

Option 4: Integration of PEF and OEF into relevant policy instruments

A fourth policy option presented is the integration of PEF and OEF into existing relevant policy instruments. The envisaged measures are described as follows in the impact assessment:

> *"Product Environmental Footprint (PEF) and Organisation Environmental Footprint (OEF) would be immediately used in instruments such as Ecolabel, GPP and EMAS for informing the criteria-development process and the creation of Sectoral Reference Documents for determining relevant environmental impacts and life cycle-based key performance indicators.*
>
> *Sectoral rules would be developed to apply OEF/OEFSRs to relevant sectors falling under the Industrial Emissions Directive to widen requirements and reporting on additional environmental aspects.*
>
> *The European Pollutant Release and Transfer Register (Regulation 166/2006) would be modified to integrate information based on OEF and its elements on a voluntary or obligatory basis. Under this option it would also be necessary to establish a set of incentives, both by the public and private sector, that would reward companies and reinforce the positive effect on environmental performance improvements."*

This option is similar to policy option 2 in that it would involve changes to a number of binding, legislative instruments[97]. Hence, for each of these instruments it would have to be considered whether it fulfils the definition of a technical regulation in the sense of the TBT Agreement in addition to being mandatory. Rules on ecolabels, for example, are certainly a technical regulation in the sense of the TBT Agreement, and thus the rules for technical regulations described above and Art. III:4 GATT would have to be considered.

Concerning OEF-related rules, it is, however, again questionable to which such rules would be trade-related and hence be covered by WTO rules. To the extent that rules on subsidies are to be included into existing legislation in the future, again the SCM Agreement of the WTO may have to be considered.

[97] An overview of relevant legislation can be found at http://ec.europa.eu/environment/gpp/eu_related_en.htm

Option 5: Recommending the application of PEF and OEF on a voluntary basis (preferred option)

The fifth option named in the impact assessment is a Commission Recommendation addressed at Member States and business, recommending them to use the PEF and OEF methodologies whenever they intend to introduce a voluntary scheme or requirements related to the measurement, verification, reporting, benchmarking, and communication of the environmental performance of products and or organisations. A draft Recommendation has in the mean time been adopted[98].

Commission Recommendations in the sense of Art. 292 TFEU are non-binding[99]. Thus, the recommendation would, at most, be a "standard" in the sense of the TBT Agreement. The above definition of "standard" does not relate to the use of certain methodologies for ascertaining a product's characteristics explicitly. However, it is generally rather broad. It could be argued that the recommendation contains some (non-binding) "rules" for products. Also, the use of such terms as symbols or labelling requirements in the above definition would not make much sense if the underlying rules on when a certain label can be used would not be covered. Hence, the recommendation can be considered a standard in the sense of the TBT Agreement. Consequently, the norms mentioned in 4.2.3 would apply.

4.5 Conclusion

In sum, WTO contains a number of disciplines that may be of relevance for an EU PEF/OEF scheme; which ones will, however, depend on the binding/non-binding nature of such schemes. The most important rules are contained in the TBT Agreement and the GATT. In light of recent WTO case law, regulatory measures that do not force economic operators to disclose and communicate a PEF-profile (i.e. the results of a PEF study) of their products, but only allow them to make certain claims related to their products' environmental footprint if they use the EU PEF scheme (including its compliance system), would have to be considered a technical regulation under the TBT Agreement.

By contrast, WTO law is not addressed at private actors. Thus, any private scheme laying down requirements for products or organisation, but not linked to mandatory legal rules is not subject to any specific WTO obligations; this applies by extension to compliance systems that are part of such schemes. With regard to EU measures on OEF, WTO law will only become relevant to the extent that these schemes have a trade component.

[98] Draft Commission Recommendation on the use of common methods to measure and communicate the life cycle environmental performance of products and organizations, http://ec.europa.eu/environment/eussd/smgp/pdf/recommendation.pdf

[99] Calliess, Christian, and Matthias Ruffert, (eds). *EUV/AEUV: Das Verfassungsrecht Der Europäischen Union Mit Europäischer Grundrechtecharta ; Kommentar*. 4. Aufl. München, 2011, Art. 292 AEUV, para. 1.

Chapter 5. Building options for PEF/OEF compliance system

This chapter is divided in three sections. Section 5.1 builds on case studies to suggest three options for operational verification activities. Section 5.2 addresses the issue of the costs of verification activities. This section includes an analysis of existing cost structures and pricing systems and a discussion on the key factors that could influence the cost of future PEF/OEF verification activities. Finally, section 5.1.3 proposes three possible directions for the future compliance system that could be applied to PEF and OEF declarations.

5.1 Verification in practice: operationalizing PEF/OEF requirements in view of compliance checks

5.1.1 Control points for PEF and OEF requirements

In order to describe the potential verification activities for PEF/OEF declarations, "control points" were developed. The purpose of control points is to translate general requirements into more operational criteria that can be evaluated during verification activities. In that respect, PEF and OEF guidance documents were reviewed and each requirement contained therein was analysed in order to explain how verification activities could be performed with details on:

- The key control points related to the requirement;
- The type of verification activities and in particular the type of documents that could be checked; and
- The competencies needed to carry out verifications.

The outcome of the analysis is presented in Annex 4. Note that most of the PEF requirements are also applicable to the OEF. For that reason, the analysis provided in Table 21 was done for the PEF guidance only.

5.1.2 Illustrative verification activities based on case studies

5.1.2.1 Approach for the case studies

Purpose of the verification case studies

The analysis of the control points revealed that although some verification activities remain the same regardless of the product or sector considered[100], most of the verification activities are

[100] This concerns all verifications that simply consist in checking that required information is provided in the PEF main report such as, for instance, the requirement that *A PEF study shall include several items (e.g. "Intended application", "Target audience", etc.) that must be presented in the "goal definition" section of the study.*

strongly dependent on the product category or sector considered. For that reason, it was necessary to develop "verification case studies" in order to shed more light on what could be possible verification activities in the future. These case studies are based on two illustrative product categories for PEF and one illustrative sector for OEF.

Assumptions on the context of the verification in the case studies

The context considered in the product case studies is the following:

- The PEF study is to be used in external communication (B2B or B2C) with comparisons or comparative assertions[101]. Consequently, the use of the existing PEFCR for the product category is a mandatory requirement of the PEF guidance.
- A PEF report has been prepared by the company carrying out the PEF study since it is a mandatory requirement according to the PEF guidance. However, this PEF report is not necessarily the communication vehicle used to disclose the PEF profile (see next point).
- The form of disclosure or communication of the PEF profile (communication vehicle) is not specified. It could be a PEF external communication report, a PEF performance tracking report, a PEF declaration or a PEF label. However, no specific requirements related to these communication forms have been developed in the PEF guidance. Therefore, specific verification activities related to these documents are not included in the present analysis.
- The overall goal of the verification is to provide confidence in the PEF profile to users or other target audiences (individuals or organisations).

The context considered in the organisation case study is the following:

- An OEF report has been prepared by the company carrying out the OEF study since compiling such a report is a mandatory requirement contained in the OEF guidance.
- The OEF study is to be used for external application (for communication to stakeholders, B2B, public authorities, etc.) with comparisons or comparative assertions. As a consequence, the use of the OEFSR applicable to the organisation is mandatory.
- The form of disclosure or communication of the OEF profile is not specified (it could be an OEF external communication report or an OEF performance tracking report). Therefore, specific verification activities related to these documents are not included in the present analysis.
- The overall goal of the verification is to provide confidence in the OEF profile to users or other target individuals or organisations.

[101] See footnote 19 in page 16 for a definition of "comparative assertion".

Framework for the analysis of case studies

Based on PEF and OEF guidance documents as well as the "Guidance for PCR development" recently released by the PCR Guidance Development Initiative[102], key items of the future PEFCRs and OEFSRs were identified. For each of these items, illustrative requirements coming from existing PCRs[103] or sectoral guidance for organisations were used as a proxy for possible future PEFCRs and OEFSRs, respectively.

It should be clarified that it is not to intended to use the case studies to present recommendations on what should be the requirements of the future PEFCRs/OEFSRs, nor to develop operational rules (as this is one of the core objectives of the upcoming pilot studies). The idea is rather to compile illustrative requirements to clarify the nature of the verification activities. The illustrative requirements do not cover all the possible requirements that can be included in the future PEFCRs/OEFSRs, instead they focus on the following key aspects: the unit of analysis, the scope of the assessment, specific/generic data requirements, and examples of other modelling parameters.

5.1.2.2 Presentation of the case studies

The case studies are presented in the paragraphs below. The product cases studies are for detergents and textiles. The organisation case study relates to the chemistry sector.

Product case study 1 – Detergents

The following existing PCRs were used to collect illustrative requirements:

- **From the French environmental labelling initiative** – BP X30-323-2: General principles for an environmental communication on mass market products - Part 2: Methodology for the environmental impacts assessment of household heavy duty laundry detergents (2012-12-06);
- **From the International EPD® System** – UN CPC 35322 Detergents and washing preparations – Updated 2013-07-18.

The analysis of the detergents case study is presented in Table 10.

Table 10: Product case study 1 – Detergents

Illustrative requirement	Possible verification activities
Functional unit	
BPX – The reference flow is "a wash" with a recommended dosage for: - An average load, - A medium soiled cloth, - A medium water hardness. In accordance with Regulation (EC) No 648/2004. **EPD –** The environmental impact shall be given per declared unit. The declared unit is "1 kg of product packed".	In the case of BPX, the reference flow is not a fixed amount such as "80 g of detergent powder for a wash". Therefore, verifications of data regarding the dosage of the product for one wash are necessary and could be based on: - Documentary checks – i.e. request for documents justifying the dosage or proving the efficiency of the product with this dosage (e.g. internal R&D tests). - Cross-check comparison of documents – e.g. to check if the dosage is realistic given the formulation of the product. - Tests – Test of the efficiency of the product with the dosage used

[102] PCR Guidance Development Initiative, 2013. Guidance for Product Category Rule Development – Version 1.0 – August 28, 2013

[103] Such PCRs can be developed in current environmental declaration programs such as the International EPD® System or the French environmental labelling intitiative.

Illustrative requirement	Possible verification activities
	in the PEF. For the EPD, the reference flow is a fixed amount and above-mentioned verifications are not applicable. The verification necessary would be a check that 1 kg has been used in the PEF study, as specified in the PEFCR.
System boundaries	
BPX *Included:* - Extraction and manufacturing of ingredients and packaging; - Transportation of components to detergent manufacturing; - Detergent manufacturing (mixing ingredients); - Packing of detergent; - Transport from manufacturing site to point of sale; - Use at the consumer place; - End of life treatment. *Excluded:* - Transportation of packaging to detergent manufacturing; - Transportation for consumer.	Check if the system boundaries, mentioned under the section "Scope of the study" of the PEF main report, are compliant with PEFCR requirements. Check if all the processes mentioned in the PEFCR are at least mentioned in the PEF report in the sub-section describing all the unit process data collected (which should be under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report). A large scope in terms of life-cycle phases, with some vagueness in the formulation will lead to more complex and time-consuming verification activities with a need for expert judgment to determine if the PEF study is compliant with the PEFCR.
EPD *Included:* - Upstream module (from cradle-to-gate) = Raw materials and semi-manufactured goods; - Core module (from gate-to-gate) = Manufacturing processes; - Downstream module (from gate-to-grave) = Use phase and end-of-life. Downstream module is optional.	
Requirements regarding primary data collection	
BPX – Composition of the product - Ingredient types (CAS number) and quantity (mass); - Quantity of water (volume) in the detergent formulation.	Verification of data regarding the composition of the products could be based on: - Documentary checks – i.e. request for company's internal documents describing the detergent formulation; - Cross-check comparison of documents – e.g. to check if the amount of a given ingredient in the product is realistic: information on amounts delivered, loss rates and number of units produced can be combined. If required, suppliers could also be audited to get information on the ingredients supplied. In particular, if the production of the detergent is subcontracted, then it may be necessary to get information from in the subcontractor to perform the verification; - On-site inspection of a manufacturing plant to evaluate the amounts of ingredients used during the detergent manufacturing process; - Tests – A chemical analysis of a sample of the product could be performed by an independent laboratory.
BPX – Composition of the primary packaging - Primary packaging materials (bottle and cap) types and quantity (mass); - % of the material made of recycled materials (recycled content).	Verification of data regarding the composition of the primary packaging could be based on: - Documentary checks – i.e. requests for documents describing the packaging; request for confirmation from supplier regarding the % of material made of recycled materials; - Visits – On site visit in the supplier's facilities to check the information on recycled content; - Tests – Direct measurements and possibly material analysis to verify the bill of materials of the primary packaging.
BPX – Manufacturing sites - Location of detergent manufacturing sites (countries); - number of units produced at each site.	Verification of the location of the production sites for the French market: review of calculations made to obtain a weighted average, review of underlying evidence, extracts from ERP software, etc. If the production is subcontracted, this information may not be directly available from the company. The verification may require contact with several levels of suppliers in the supply chain until auditable information is found.
BPX – Energy use in manufacturing sites (semi specific data) - Quantity and type of energy (electricity, fuel oil ,natural gas).	Verification of data regarding the energy consumption of the manufacturing plant(s) could be based on: - Documentary checks – i.e. request for documents such as invoices indicating the annual energy consumption of the plant and documents with the annual number of units produced per type of

Illustrative requirement	Possible verification activities
	product. - On-site measurements in the manufacturing plant, if technically feasible. If the production is subcontracted, the necessary information may only be available through contact with the actual manufacturer of the detergent.
BPX – Washing temperature (semi-specific data) The electricity consumption for a washing temperature of 30°C can be used if the manufacturer can prove the effectiveness of the detergent at 30 °C. Otherwise, the electricity consumption for a washing temperature of 43.1°C must be used. The electricity consumption is 0.42 kWh/wash at 30°C. The electricity consumption is 0.60 kWh/wash at 43.1°C.	If the electricity consumption associated with a washing temperature of 30°C has been used: Verification activities could include: - Documentary checks – i.e. request for documents describing internal R&D tests and proving the detergent efficiency; - Test of the 30°C efficiency. Such a test could be performed by the manufacturer or by an external body.
BPX – Composition of the secondary packaging - Secondary packaging material types and quantity (mass); - % of the material from recycled materials (recycled content).	Verification of data regarding the composition of the secondary packaging could be based on: - Documentary checks – i.e. request for documents describing the packaging; request for delivery bills from the supplier; request for a confirmation from supplier regarding the % of material made from recycled materials; - Visits – On-site visit of the supplier's plant to check information on recycled content; - Tests – Direct measurements and material analysis.
EPD – Specific data shall be used for the Core module. Specific data are data gathered from the site where specific processes are carried out. The requirements for specific data also include actual product weights, main material weights of product, main material processing of product, amounts of raw materials used and amounts of waste produced, etc.	See above.
Requirements regarding secondary data	
BPX – Transportation from the suppliers the manufacturing plant *Road transportation* - distance: 1200 km - maximum weight: 24 tonnes *Sea transportation* - distance: 8000 km	Check whether the generic data are listed under the item "Description and documentation of all unit process data collected" in the section "Compiling and recording the Resource Use and Emissions Profile". Check whether the generic data used are strictly similar to PEFCR requirements – i.e. same values cited in the PEF main report.
BPX – Composition of the tertiary packaging - Tertiary packaging material types and quantity (mass); - Number of uses of reusable tertiary packaging (e.g. palette).	Check if the generic data reported in the PEF report are strictly similar to the generic data implemented in the LCA tool.
BPX – Use phase scenario - Electricity consumption (0.42 or 0.6 kWh/wash depending on wash temperature); - Water consumption (60L).	Existing PEFCRs for detergents have requirements regarding generic data but to date, different approaches remain in practice. In the BPX clear values are provided for generic activity data e.g. 60L of water for one wash, or 600 km for transportation between manufacturing and point of sale. When generic activity data is specified, no primary data can be used, even if the information is available from the company. In addition, as regards LCIs to be used, it is stated that LCIs from the ADEME public LCI database shall be used but this database is not yet available, thus the choice of LCI-type secondary data is left to the LCA practitioner.
BPX – Transportation between manufacturing plant and point of sale: - Road transportation; - Distance: 600 km; - Maximum weight: 24 tonnes.	
BPX – End-of-life treatments For packaging: - Recycling rate of packaging materials; - Respective share for each end-of-life routes (incineration, landfill). For detergent: - 100% sewage treatment plant; - Treatment process; - End-of-life of sewage sludge; - Percentage of reduction of compounds during waste water treatment.	In the EPD, no values are provided for generic activity data. In addition, if primary data is available, this data can be used instead of generic data. Moreover, as regards LCI-type secondary data, some LCI databases are suggested but no specific LCI are required.
BPX – Generic data from future ADEME public LCI database - Production processes for each ingredient; - Production processes for each packaging material; - Energy production in France; - Transportation (road, sea); - End-of-life treatments.	The approach taken in practice in the future PEFCRs can have a noticeable effect, in terms of workload and competencies required, on how the verification of generic data will be handled: i.e. straightforward check of clear requirements for activity data and LCI-type data through audit; or analysis based on expert judgments requiring LCA experience.

Illustrative requirement	Possible verification activities
EPD – For the Upstream and Downstream module also "selected generic data" may be used if "specific data" is lacking.	
Modelling parameters and assumptions	
Use phase scenario **BPX** - Water consumption for one wash: 6oL - Electricity consumption for one wash: > 0.42kWh/wash (30°C washing temperature) > 0.60kWh/wash (43.1°C washing temperature) **EPD** EPD – Integration of downstream module (including use phase) on a voluntary basis. Use scenario not specified. Water and energy consumption shall be included and values shall be representative of the region of use of the product.	If applicable, check whether the use scenario (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) is similar to the PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report. If applicable, check whether the PERCR-specific use scenario is properly implemented in the global LCA tool and is used for the calculation of the PEF profile. For EPD verification is less straightforward since requirements are not as stringent as in the BPX.
Capital goods **BPX –** Capital goods not included **EPD -** The manufacturing of production equipment with an expected lifetime over three years, buildings, infrastructure, machines and other capital goods shall not be included.	Check whether inclusion/exclusion of capital goods is specified under the item "system boundaries" in the section "Scope of the study" of the PEF Main report. Check if the system boundaries are compliant with PEFCR requirements under the section "Scope of the study" of the PEF main report. (cf. requirement on System boundaries)
End-of-life **BPX –** End-of-life scenarios representative of French context **EPD –** Data for the end of life shall be based on information being technically and economically feasible and compliant with current regulations.	Check whether the end-of-life scenarios (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) are in line with PEFCR requirements. Check whether the explanations and sources of the PEFCR are presented in the PEF report Check whether the end-of-life scenario are properly implemented in the LCA tool and are used in the calculations of the PEF profile.
Impact indicators	
Category – Model – Indicator **BPX** - Climate Change – IPCC 2007 – g CO_2 eq. - Ecotoxicity for aquatic fresh water – USETox – CTUe - Resource Depletion (mineral, fossil) – CML – g Sb eq. **EPD** - GWP, 100 years – CO_2 eq. - Emission of ozone-depleting gases –CFC 11 eq., 20 years). - Emission of acidifying gases – kg SO_2-eq. - Ground-level ozone – Ethene-eq. - Eutrophication potential – kg PO_{43}- eq.	Check whether the Environmental Footprint impact categories, models and indicators presented under the section "Scope of the study" of the PEF Main Report are in line with PEFCR requirements. Check whether the PEFCR-required Impact Assessment Models are available in the LCA tool and are used for the calculation of the PEF profile.
Additional information	
EPD – Other indicators - Material subjected to recycling (if any) [kg]. - Waste generation classified into hazardous [kg] and other waste [kg]. - Electricity consumption during manufacturing phase [MJ].	Check whether these points are mentioned under the section "Calculating PEF impact assessment results" of the PEF main report and are in line with PEFCR requirement.

Product case study 2 – Textiles

The following existing PCRs were used to collect illustrative requirements:

- **From the French environmental labelling initiative –** Methodology for the environmental impacts assessment of clothing products – Advanced draft PCR – July 2013;
- **From the Taiwanese EPD –** Environment and Development Foundation (EDF) – Product Category Rules (PCR) for Preparing an Environmental Product Declaration (EPD) for Artificial Fibre Textiles – PCR 2011:1.0 – Super Textile Corp. Version 1.0. 2011-12-31.

The analysis of the textiles case study is presented in Table 11.

Table 11: Product case study 2 – Textile

Illustrative requirement	Possible verifications activities
Functional unit	
BPX – The functional unit is: "One piece of clothing worn and maintained". For instance for a T-shirt for men: size L and 50 maintenance cycles. **Taiwan EPD –** The declared unit is one piece of artificial fibre textile with the material and product weight declared.	In both cases, the reference flow are not fixed amounts such as "160 g of polyester for a T shirt" Therefore, verifications of the validity of the data for the reference flow are necessary.
Requirements regarding primary data collection	
BPX – Composition of the product - Types and quantities for each material of the product, including accessories; - if applicable, % of the material from recycled materials (recycled content).	Verification of data regarding the composition of the product could be based on: - Documentary checks within the company – i.e. requests for company's internal documents describing the bill of materials; - Cross-check comparison of documents within the company– e.g. to check if the amount of a given material in the product is realistic: information on amounts delivered, loss rates and number of units produced can be combined; - Cross-check comparison of documents between different stages of the supply chain; - On-site inspection in a manufacturing plant to evaluate the quantity of material used during the manufacturing process of the textile and/or accessories; - Tests – If technically feasible, an analysis on a few product could be performed by an independent laboratory. In all cases, when the information required cannot be found at a given stage of the supply chain (e.g. the company performing the PEF study), the verification activities should be escalated to a previous stage (e.g. tier 1 supplier).
BPX – Composition of the primary, secondary and tertiary packaging - Types and quantities for each material of each packaging level.	Verification of data regarding the composition of the packaging could be based on: - Documentary checks - i.e. requests for documents describing the packaging; request for a confirmation from supplier regarding the % of material from recycled materials; - On-site visit of the supplier's facilities to check the information on recycled content; - Tests: direct measurements and possibly material analysis to verify the bill of materials of the primary packaging.
BPX – Textile manufacturing sites - Location of textile manufacturing sites (countries); - Loss rate (semi-specific data). When collecting primary data, the determination of the location sites for manufacturing, weaving, knitting and textile finishing must be conducted as follows: - either from the sales/production forecasts (when the first order is placed) including stock replenishment (stock replenishment must be consistent with previous years); - or considering the main supplier of the piece of clothing when it	Verification of choices made regarding electricity (and other energy) country mixes would necessitate a review of either sales/production forecasts or respective shares of suppliers for a given type of product. Such verification could be based on basic documentary checks (documents provided by the company) or more thorough verification implying a review of data collection procedures and calculations made by the company to identify the main supplier(s), review of underlying evidence, extracts from ERP software, etc.

Illustrative requirement	Possible verifications activities
represents more than 70% of the total production of this piece of clothing	
Taiwan EPD – Site-specific data (for example, specific data for manufacturing plant or transportation) shall be used for the manufacturing of major constituents of the artificial fibre textile products. If other types of information are used, description of the information and rationale for using the information shall be provided. For site-specific data of main materials manufacturing plants, specific data from a plant representative of such a site may be used.	Identification of the major constituents (verification of the information contained in the technical documents describing the constituents used). Possible cross-checks with other documents such as invoices or delivery bills; If water or electricity is used, verification activities could include a verification of the water or electricity meter or a review of the process technical documentation, or verification based on invoices.
Taiwan EPD – For the transportation of product to the distribution sites or retailer sites, the actual mode of transportation and distance travelled shall be considered.	Cross-check of the distance used to model transportation with a software that permit calculations between two locations. If the company performing the PEF study has subcontracted the transportation activities, it may be necessary to contact the subcontractor to collect auditable information on: - the type of vehicle used for transportation (such as the technical documents on the fleet of vehicles, extracts of the ERP software for fleet management) - the transportation distances for deliveries
Requirements regarding secondary data	
BPX – Transportation from the suppliers to the storage location in France: Possibility to choose between various generic transportation scenarios with different transportation distances and transportation modes: "Euromed"; "Turkey"; "World"; "Europe"; "France".	Request evidence justifying the choice of a given scenario. Verification activities could be based on: - Documentary checks - i.e. requests for documents describing the suppliers, their location, the type of shipments - Review of supply chain management softwares/databases. - Request for confirmation from the supplier (could be based on interviews or written statements, or verification of purchase orders)
BPX – Transportation between storage in France and point of sale: - Road transportation; - Distance: 500 km.	Check whether the generic data are listed under the item "Description and documentation of all unit process data collected" in the section "Compiling and recording the Resource Use and Emissions Profile". Check whether the generic data used are strictly similar to PEFCR requirements – i.e. same values cited in the PEF main report. Check if the generic data reported in the PEF report are strictly similar to the generic data implemented in the LCA tool.
BPX – Electricity use at manufacturing sites	
BPX – Generic data from future ADEME public LCI database - Production processes for each material; - Production of chemicals used during textile finishing; - Production processes for each packaging material; - Electricity production in various countries; - Transportation (road, sea); - End-of-life treatments. etc.	

Illustrative requirement	Possible verifications activities
Modelling parameters and assumptions	
BPX The usage scenario that shall be considered depends on the textile care symbols displayed on the product. For example, if machine wash is permitted, the usage scenario shall be "machine wash with regular cycle" If tumble drying is permitted, tumble drying must be considered for 32.2%, and natural drying for the remainder. If ironing is permitted, generic ironing durations (for shirts, trousers, etc.) shall be used. Electricity consumption for one wash: - 30°C: 0.39 kWh/cycle; - 40 °C: 0.554 kWh/cycle; - 60°C: 0.86 kWh/cycle. 3Kg of laundry per wash 29,1 L of water per wash etc. **EPD** The product can be reused after each cleaning/washing for a total of two years. Washing is done by washing machine with cold water and tumble dry or hang dry (without heat). The usage scenario is assumed as follows: (1) Power rating of washing machine: Assume the washing machine is a top-load machine with a power rating of 420 W. (2) Washing machine and water consumption: Assume washing 5 kg of clothing each time. Each washing cycle takes 40 minutes (0.67 hour) and requires 16 L of cold water for washing and 64 L of cold water for rinsing. That is, 80 L of cold (non-heated) water is used for each cleaning cycle. (3) Total number of washing: Assume one cleaning per week for two years for a total of 104 cleaning cycles.	If applicable, check whether the use scenario (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) is similar to the PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report. If applicable, check whether the PEFCR specific use scenario is properly implemented in the global LCA tool and is used for the calculation of the PEF profile.
Impact indicators	
Category – Model – Indicator **BPX** - Climate Change – IPCC 2007 – g CO_2 eq.; - Freshwater eutrophication – ReCiPe 2008 – kg of P eq. **Taiwan EPD** - Global warming kg CO_2 equivalent; - Acidification kg SO_2 equivalent; - Photochemical oxidant formation kg C_2H_4 equivalent; - Eutrophication kg PO_4^{3-} equivalent; - Ozone depletion kg CFC-11 equivalent.	Check whether the EF impact categories, models, and indicators presented under the section "Scope of the study" of the PEF Main Report are in line with PEFCR requirements. Check whether the PEFCR-required Impact Assessment Models are available in the LCA tool and are used for the calculation of the PEF profile.
Additional information	
BPX Net water consumption in m^3. **Taiwan EPD** The energy consumption during each product life cycle phase shall be declared. If the product is intended for end-users, the power consumption during the use phase shall also be declared. The information on resource input during the product life cycle phase shall be declared.	Check whether these points are mentioned under the section "Calculating PEF impact assessment results" of the PEF main report and are in line with PEFCR requirement.

Sector case study – Chemical sector

The following existing sectoral guidance was used to collect illustrative requirements for primary and secondary data: WBSCD chemicals, 2013. Guidance for Accounting & Reporting Corporate GHG Emissions in the Chemical Sector Value Chain. This guidance was used as a rough proxy (only covering GHG emissions) of potential requirements for primary/secondary data in an OEFSR of the chemical sector.

The analysis of the chemical sector case study is presented in Table 12.

Table 12: Organisation case study – Chemistry sector

Illustrative requirement	Possible verification activities
Requirements regarding primary data collection : *OEF requirement – Specific data shall be obtained for all processes/activities within the defined Organisational boundary and for background processes/activities where appropriate.*	
Production of purchased materials Includes impacts generated during extraction, production, and transportation (cradle to tier-1 supplier gate) of goods/services purchased or acquired by the OEF reporting company in the reporting year. *Examples of primary data requirements:* - Product-level cradle-to-gate PEF profiles from suppliers; - OEF data from suppliers broken down to the product level.	Verification related to this upstream activity could include: - Documentary verification of PEF and OEF profiles provided by suppliers, cross-check of the values with the values implemented in the OEF calculation tool and values presented in the OEF report. -Review of calculations made by the reporting company if OEF data from a supplier was adapted to a given product purchased by the reporting company.
Transportation of purchased materials Includes impacts generated during transportation and distribution of purchased products and services between a company's tier 1 suppliers and its own operations (in vehicles and facilities not owned or controlled by the reporting company). *Examples of primary data requirements:* - Activity-specific Resource use and emission profile from third-party transportation and distribution suppliers; - Actual distance travelled; - Carrier-specific impact factors.	Verification related to this upstream activity could include: - Documentary verification of data provided by suppliers, cross-check of the values with the values implemented in the OEF calculation tool and values presented in the OEF report. - If more thorough verifications is required, a review of the quality of the data calculated by the suppliers may be necessary (i.e. the data provided by the supplier has not undergone external verification). - If actual distance travelled figures are used, verification based on extracts of ERP software of Excel files showing deliveries with departure points and arrival points, stops etc. could be performed: such information may only be available from the third-party transportation company.
Disposal and treatment of waste generated by upstream activities Includes impacts of disposal and treatment of waste generated in the reporting company's operations in the reporting year (from facilities not owned or controlled by the reporting company). *Examples of primary data requirements:* - Site-specific impact data from waste management companies; - Company-specific metric tonnes of waste generated; - Waste company-specific impact factor.	Verification related to this upstream activity could include: - Documentary verification of data provided by suppliers, cross-check of the values with the values implemented in the OEF calculation tool and values presented in the OEF report. - If more thorough verification is required, a review of the quality of the data calculated by the suppliers may be required (i.e. the data provided by the supplier has not undergone external verification). - If company metric tonnes of waste generated are used, a review of the data collection process to arrive at this value may be necessary. Cross-checks with information from the waste collection service provider could be also envisaged.
Employees commuting using vehicles not owned or operated by the organisation Includes impacts generated during transportation of employees between their homes and their worksites in the reporting year. *Examples of primary data requirements:* - Specific distance travelled and mode of transport, collected from employees.	Verification related to this upstream activity could include: - Review of the data collection process and related calculations such as extracts from Human Resources software. If the company has set up an online questionnaire to acquire information from its employees, a review of the questionnaire and of the employees answers could be performed. It could include coherence checks aiming at identifying incorrect values resulting from data input errors.
Requirements regarding secondary data	
Transportation and distribution of goods/services provided to the client, where means of transport are not owned and/or operated by the organisation. For chemical companies producing primarily intermediate products, it only includes impacts generated during transportation and distribution of products sold by the reporting company in the reporting year between the point of sale of the reporting company	Verification related to these downstream activities could be to: - Check whether the generic data are listed in the OEF report in the appropriate section - Check whether the generic data used are strictly similar to OEFSR requirements (if applicable - i.e. if the OEFSR mentions particular values to be used a s generic data).

Illustrative requirement	Possible verification activities
and their direct business customers. *Examples of generic data requirements:* - Estimated distance travelled based on industry-average data; - National/regional average emission factors.	- Check whether the generic data used are in line with OEFSR requirements (if applicable - i.e. if the OEFSR does not mention particular values to be used as generic data but rather guidance on type of acceptable generic data sources for instance). - Check if the generic data reported in the OEF report are strictly similar to the generic data implemented in the LCA tool.
Use of goods/services provided Includes direct impacts during the use phase of goods and services sold by the reporting company in the reporting year. *Examples of generic data requirements:* - Estimated energy used based on national average statistics on product use; - Average N2O field emissions as a function of fertilizer type from scientific literature (for climate change impact).	
EOL treatment of goods/services provided Includes impacts from waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life. *Examples of generic data requirements:* - Estimated disposal rates based on national average statistics; - Estimated emissions or energy use based on national average statistics.	

5.1.3 Options for the operational verification of the PEF/OEF studies

5.1.3.1 Presentation of the levers for reassurance and deriving options

Levers for reassurance

The examination of the control points related to PEF/OEF requirements as well as the analysis of the illustrative verification activities based on existing PCRs revealed that there are three major levers to provide reassurance in the results of a PEF or OEF study:

- **Verification of the methodology** – This refers to the compliance with the purely methodological requirements of the PEF guidance and the PEFCR. These requirements address general issues related to LCA and environmental performance accounting such as how to present the objective and scope of the studies, to describe the unit of analysis, to deal with allocations, biogenic carbon, etc.
- **Verification of the input data** – This refers to the checks assessing the traceability (review of the data collection and data consolidation processes) and reliability (data appropriateness and validity) of the input data used for footprint calculations. Note that the input data can be categorized as:
  - **Specific** or **generic** data; or
  - **Activity data** (e.g. mass of material, transportation distance, water or energy consumption) and **LCI data** (unitary module from LCI databases – e.g. EF of 1 kWh of electricity in Germany; EF of 1kg of PEF produced in Europe).

- **Verification of the LCA calculations –** This relates to the checks performed within the LCA tool to ensure that the output data (i.e. the results of the PEF study, including the resource use and emissions profile, and impact assessment) is reliable. Two main types of tool verification can be distinguished:
  - **Verification of tool settings (not related to a specific PEF study)** – i.e. appropriate configuration of the tool. This concerns for instance EF Indicators and Impact Assessment models (e.g. classification of flows, characterisation factors), the format of the resource use and emission profile, the nomenclature of flows, etc.
  - **Verification of LCA modelling (for a given PEF study)** – i.e. appropriate implementation of methodological requirements and input data in the LCA tool.

Presentation of the options for PEF/OEF compliance systems

The key principle driving the development of the options is that the best approach for verifying environmental profiles shall be a balanced mix of activities on 1/ LCA rules and underlying assumptions 2/ the data reliability and traceability, and 3/ how these two aspects are transcribed in terms of LCA calculations in the LCA tool. Indeed, none of these levers is sufficient in itself to give confidence in the results of a PEF or OEF study. Thus, the three options presented in Table 14 derive from specific combinations of these three levers.

The three options actually refer to three "level of verification" which were derived from the concept of "limited assurance" and "reasonable assurance" used primarily in the field of financial audit (see Table 13). The concept is also increasingly used for non-financial verification, as for instance in CSR report auditing. Through each level of verification, a certain level of confidence in the results is sought. The more intense the verification, the higher the level of confidence should be at the end of the verification process. A more intense verification (higher verification level) involves a more thorough verification process with more evidence required.

Table 13: Illustration of the main differences between reasonable and limited assurance

Level of assurance	Main application scope	Example of wording of the conclusion
Reasonable assurance	▪ Audit of financial information ▪ Verification of GHG emissions under EU-ETS ▪ Strategic KPIs in the CSR reports (mainly on a voluntary basis)	"In our opinion, the reporting company's assertion that the PEF profile is in conformity with the requirements of the reference PEFCR and PEF guidance is fairly stated, in all material respects.
Limited assurance	▪ Common practice for the verification of CSR indicators ▪ Level of assurance generally used to verify the adherence to voluntary programs (ICMM[104], AERES[105], etc.)	"Based on our review, we are not aware of any material modifications that should be made to the company's assertion that the PEF profile is in conformity with the requirements of the reference PEFCR and of the PEF guidance"

[104] International Council on Mining and Metals. http://www.icmm.com/our-work/sustainable-development-framework/assurance

[105] French Association of Companies for the Reduction of Greenhouse gases http://www.epe-asso.org/aeres/presentationa.php

Table 14: Presentation of the options for PEF (respectively OEF) compliance systems

Level of verification	Lever	Description
Level 1 *(very) limited assurance*	**Methodology**	▪ Verification of the PEF report compliance with major (i.e. basic*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 20-30% of the specific activity data (based only on documentary checks of activity data).
	LCA calculations	▪ Verification of tool settings.
Level 2 *Limited assurance* Level 1 verification and:	**Methodology**	▪ Review of the PEF report compliance with additional (i.e. intermediate*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 20-30% of the specific activity data (based on advanced documentary checks, and if necessary other types of verification activities). ▪ Verification of the reliability and traceability of 20-30% of the generic data (based on documentary checks).
	LCA calculations	▪ Verification of tool modelling for the basic PEF/PEFCR methodological requirements in the LCA tool. ▪ Verification of proper implementation of 20-30% of the specific activity data and corresponding calculations in the LCA tool.
Level 3 *Reasonable assurance* Level 2 verification and:	**Methodology**	▪ Review of the PEF report compliance with additional (i.e. advanced*) PEF guidance/PEFCR methodological requirements.
	Input data	▪ Verification of the reliability and traceability of 60-80% of the specific activity data (based on advanced documentary checks; and if necessary audits, review of data collection procedures, etc.). ▪ Verification of the reliability and traceability of 60-80% of the generic data (based on documentary checks).
	LCA calculations	▪ Verification of proper implementation of the intermediate PEF/PEFCR methodological requirements in the LCA tool. ▪ Verification of proper implementation of the 60-80% specific activity data and corresponding calculations in the LCA tool.
Level 3 bis[106] *(Improved) reasonable assurance* Level 3 verification and:	**Methodology**	▪ Same as level 3.
	Input data	▪ Verification of the reliability and traceability of 80-90% of the specific activity data (based on advanced documentary checks; and if necessary audits, review of data collection procedures, etc.). ▪ Verification of the reliability and traceability of 80-90% of the generic data (based on documentary checks; and if necessary audits, review of data collection procedures, etc.).
	LCA calculations	▪ Review of the LCA tool as complete as possible.
* See section 5.1.3.2 for a definition.		

[106] "Ideal" verification that could be performed by a critical review panel for a highly sensitive product. This option should not be considered for the upcoming pilots.

5.1.3.2 *Intensity of verification activities for each lever*

Verification of the methodology

The methodological requirements of the PEF guidance and the PEFCR were classified into three categories: basic, intermediate and advanced. Here are some examples:

- **Basic** – Goal definition; Scope definition; Unit of analysis; etc.
- **Intermediate** – Offsets; Resource use and emissions profile; Additional environmental information; End-of-life; etc.
- **Advanced** – Land use change; Biogenic carbon emissions and removals; etc.

A more detailed proposition of categorisation is presented in Annex 5.

Verification of input data

As regards the verification of input data, two aspects need to be considered: the *scope* and *depth* of data verification for each level.

Scope of input data

In the options, the percentage of data coverage increases from one level to another. The data to be included as a priority in the scope of verification could be selected based on two key criteria:

- The contribution of the data to the overall EF results;
- The likelihood of incorrect data, which depends on factors such as the degree of complexity of the data, the degree of complexity of the supply-chains, etc.

Depth of verification

The depth of verification refers to the amount and quality of evidence required. To increase depth of verification, a number of different verification activities could be combined when possible:

- Documentary checks (on-site or sent documents) with possible cross-check comparison of documents;
- Audit of data collection and calculation processes;
- Cross-calculations;
- Tests and measurements.

Within this perspective, proof that may be judged satisfactory for level 1 verification may not be sufficient for higher levels; therefore additional information may be required. A typical example in a complex supply chain or when subcontracting is involved is the necessity to look for first-hand information from tier 1 (or higher tiers) suppliers or from subcontractors.

5.2 Discussion on the cost of PEF/OEF verification

5.2.1 About cost structures and pricing of compliance systems

This section provides a summary of the relevant information found during the review of existing schemes on cost structures and pricing of compliance systems. It builds mostly on the section "cost of compliance" of the "Compliance system" factsheets of the 14 selected schemes (see Annex 3).

Table 16 summarises the information available on the 14 schemes. This section focuses on the identification of sources of costs and the description of pricing systems found within schemes. For the latter aspect, prevailing price structures are described, when this information is available. References to individual schemes are made to illustrate noteworthy points.

Data availability

As regards cost data availability, it can be noted that for most schemes, there was at least some information available on price structures, sometimes supplemented with concrete price examples. The three GHG reporting standards reviewed[107] are an exception to this as no specific data on costs could be sourced within the scope of this project. These standards, in particular the two "GHG Protocol" voluntary standards, lack formalised application, compliance and verification processes which explains the lack of data on costs; instead, only the reference that costs are associated with the standard cost of operational emissions verification was found for these standards.

Sources of costs for operators/applicants

There are different ways of categorising sources of costs. These include most importantly:

- Direct versus indirect costs[108]:
  - Direct costs are those associated with certification services such as issuance of the relevant certificate or label, membership fees and the audits and tests needed to obtain certification. Under this category, costs can be distinguished further into fixed and variable costs as well as costs arising at different stages of the process, all of which are explained below.
  - Indirect costs arise when the applicant has to adapt internal processes and management systems to enable the meeting of the standard's requirements. These costs mostly relate to internal resources involved. These include both administrative costs, e.g. sufficient documentation to facilitate audits as well as costs related to improving production or other processes to be in line with the particular standard's requirements. Often indirect costs are high in the initial application

[107] Australian National Greenhouse and Energy Reporting; GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)"; GHG Protocol – Product Life Cycle

[108] The distinction between direct and indirect costs follows SQ Consult (2012) Selecting a biomass certification system – a benchmark on level of assurance, costs and benefits, report for NL Agency.

period or early years of certification but decrease once new or improved systems are in place.

- Fixed versus variable costs[109]: A good example here are membership fees compared to quantity dependent fees.
  - An example of fixed costs are membership fees. While these may differ across applicants based on e.g. different categories of company size defined as staff size or turnover, they are fixed from the point of view of an applicant.
  - Variable costs include quantity-dependent fees, in other words fees that change with the amount of output for which certification is sought. In the case of the biofuel certification schemes reviewed by SQ Consult (2012), this may be tonnes of biomass processed. Other variable cost drivers linked to output would be the number of production units (and their distance from each other), making site visits more time-intensive and hence costly.
- Costs arising at different stages in a certification process, such as application, evaluation and usage costs[110].
  - **Application costs** include administrative and other costs associated with compiling the information necessary for demonstrating compliance (these are often *indirect costs*, see above). This may also include costs for training required to join certain schemes (as mentioned under the "Label LUCIE") as well as admission costs (GS mark);
  - **Evaluation costs** can include costs for pre-evaluation (mentioned in the case of FSC); costs associated with (third party) certification, tests, audits and visits to check compliance, both for initial and for on-going assessments, in many cases yearly, compliance monitoring (these are also called *direct costs* in the RED factsheet). All these are examples of direct costs;
  - **Usage costs** may include fixed costs such as membership fees, costs for label management and license fees for use of the label. Again, all these examples are direct costs of certification.

[109] The distinction between fixed and variable costs follows SQ Consult (2012).

[110] The distinction is taken from the Blue Angel, The Blue Angel, 2011. Company Information The Blue Angel – Stay Ahead of the Competition with The Blue Angel!

Pricing systems and categories of fees

Pricing systems are analysed according to two dimensions: 1/ the types of fees, which partly mirror the different sources of costs as identified above, and 2/ how the level of fees is determined across different operators using a scheme (and thus subjected to the compliance system).

- **Types of fees** – Both fixed and variable costs occur when complying with the requirements of a given scheme, as explained above. Many schemes require a *one-time*, sometimes fixed application or admission fee (or in the case of Label "LUCIE" there is a one-off fixed cost for training) and *ongoing* annual fees which can cover both evaluation (e.g. certification, audits fees) and usage costs (such as license fees), following the different sources of costs set out above.
- **Level of fees** – In order to determine the level of fees for different operators within the scheme, different criteria were found, such as:
  - Total annual turnover of the operator – e.g. Blue Angel, certification schemes under the RED;
  - Number of employees and/or number of sites determining costs of evaluation – e.g. Label "LUCIE";
  - Output – i.e. quantity of a product produced that should be certified – e.g. biomass processed into biofuels in the case of the certification schemes under the RED.
  - Type of operator (position in the supply chain) – e.g. distinction between producer and trader certificate fees under the Fairtrade scheme, which are set according to the number of members in a producer group (more members, larger fee) and the size of trade operators (lower fees for smaller operators);
  - Number of years in the scheme – e.g. in the Fairtrade scheme, level of fees are variable over time: the basic annual fee is higher in the first year;
  - Membership types – e.g. under RSPO and FSC schemes distinctions are made between individual members, non-profit and for-profit organisations; within those groups, costs vary based on geographic location (e.g. developed and developing countries) and size (e.g. turnover and/or number of employees).

For other schemes, no systematic information may be available when costs are specific to the product or manufacturer. For instance, this is the case with:

- CE marking: the manufacturer is solely responsible for product assessment and compliance and therefore costs are individual to the manufacturer;
- NF mark: costs are likewise product-specific
- EU Organic Farming Label: can lead to very different costs per hectare depending on the country and product.

A further interesting example is the Australian NGER in that there are different scenarios as to who pays the auditing costs; in cases of suspected breach of legislation, audits may be mandated by the regulator and hence would have to be paid for by the audited organisation. Audits undertaken as part of the general compliance strategy are paid for by the regulator.

Examples of prices

The full range of price examples available can be found in Table 16 on page 93. Table 15 below presents some selected examples to provide a quick overview of price and fee examples according to the different categories identified.

Table 15: Examples of prices and fees – Source: Own compilation based on Annex 3

Type of fee/cost	Amount	Source
One-time application fee		
Examples	€250 €525 €210 to €620	Blue Angel Fairtrade (trader certificate) Fairtrade (producer certificate)
Annual fee		
- graduated fee	€270 to €6,000	Blue Angel *(seems to be a member ship fee not including certification)*
- fixed/membership fee	$75 to $5,000 $100 to $10,000 €2,000 €500 €250 €100	FSC (non-profit organisations) FSC (for-profit organisations) RSPO (ordinary member) RSPO (small, <500 ha ordinary member) RSPO (affiliate member) RSPO (supply chain associate)
- certification fee	€1,200 to €3,000 €1,430 to €3,470 €1,170 to €2,770 €4,200 (initial audit) - €1,950 (second audit)	Global Organic Textile Standard Fairtrade (producer certificate, year 1) Fairtrade (producer certificate, after year 1) Label "LUCIE" (*evaluation cost* for a 20-person company)
- annual license fee	1 000€ to €12,000 €120	Label "LUCIE" (depending on company turnover) Global Organic Textile Standard (for the right to use the GOTS logo on certified textile products)

Table 15 illustrates the challenge in presenting information in a synthesised way as the way as the different standards use terminology related to categories of costs and fees. Caution should therefore be taken when interpreting the prices quoted for annual fees, in particular. These may in fact convey rather different types of cost information as spelled out in the table; for example, they may or may not include costs associated with certification.

It would be interesting to have a better understanding of how these costs relate to overall production and/or marketing costs. Little information has been found on this, however. In the case of the GS mark, it is indicated that the average cost for a test is insignificant compared to overall production costs. For the EU organic farming label, the share of certification costs is estimated to be around 3% of the farm's total turnover and globally 1% or less of the retail sales price (ranging from 0.1% to 2.1%, depending on the product and the country) in 2008.

Table 16: Summary of cost-related information from 14 selected schemes
Source: Own compilation based on Annex 3

Scheme	Sources of costs for operators/applicants	Drivers of costs	Scheme pricing system	Examples of prices
Australian National Greenhouse and Energy Reporting (NGER)	Standard cost of operational emissions verification, but no systematic ex-ante third-party verification.	Its cost would vary depending on the complexity of the verification scope, the number of sources to be verified, and the availability of data. The cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving, and where an entity fails to demonstrate that emissions data has been sufficiently monitored.	No detailed information. But to note that in cases of suspected breach of legislation, audits may be required, paid for by the audited organisation. Audits realised as part of the compliance strategy are paid for by the Clean Energy Regulator.	N/A
Blue Angel (Blauer Engel)	Costs can be divided into 3 parts: application, evaluation and usage costs.	The more complex and multi-layered a product or service is, the more extensive the evaluation requirements and their ensuing costs become.	One-time application fee and a graduated annual fee. The fee amount is based on the total annual turnover of all products or services within the Basic Award Criteria for each eco-label according to the schedule of fees. Costs for running a compliance system would come in addition.	One-time application fee: €250 Annual graduated fee varies according to the annual turnover. There are 7 different categories, starting at turnover up to €0.25 m, all the way up to €25.0; depending on the turnover, annual fees range from €270 to €6,000.
CE marking	Costs are associated with conformity checks and drawing up technical documentation. Certain products require an authorised third party (Notified Body) to carry out the conformity assessment procedure. These Bodies are authorised by national authorities and officially 'notified' to the Commission and listed in the NANDO (New Approach Notified and Designated Organisations) database.	Costs vary according to the manufacturer and the type of product. Costs are minimal where the assessment can be carried out internally. Where third party assessment is needed, the cost will likely be greater.	No joining fee and no annual fee. Manufacturer is responsible for product assessment and compliance – pricing system is not available.	Not publicly available. All costs are individual to the manufacturer.
EU Organic farming label	Cost is composed of certification fees, efforts for documentation, preparation for the control visit, the control visit and the possible follow-up visits.	Cost seems to depend on the products concerned, the size of the organisation, and the turnover.		Costs vary by Member State. The share of certification costs is estimated to be in a range of 3% of the farm's total turnover and globally 1% or less of the retail sales price (from 0.1% to 2.1%, depending on the product and the country) in 2008. Example of cost: in France in 2011 for example, a vegetable producer who owns two hectares pays about 400€ per year, a breeder and grain producer who owns 50 ha pays between €550 and €700 per year.

Scheme	Sources of costs for operators/applicants	Drivers of costs	Scheme pricing system	Examples of prices
Forest Stewardship Council (FSC)	Cost is associated with pre-evaluation, evaluation and annual surveillance audits.	Varies according to the size of the organisation, the number of individual sites, the geographic location, the FSC accredited certification body chosen, the complexity of the business, whether other management systems such as ISO14001 or ISO 9001 are already in place.	"Fixed" costs include the FSC membership fees. Additional costs for the operator relates to the certification services provided by the certification body.	Examples of annual fixed costs: • Individual members vary by geographic location, $100 pa in the north and $38 pa in the south. • Non-profit organisations vary by geographic location and size (small, medium, large, and very large – as determined by the number of employees and annual turnover), fee varies from $75 to $5,000. • For-profit organisations vary by geographic location and size (small, medium, large, and very large – as determined by the number of employees and annual turnover), fee varies from $100 to $10,000.
GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	Cost of compliance is associated with the standard cost of operational emissions verification. However, no compliance cost formally linked to the initiative.	Cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving. Additional verification of data may be required in instances where an entity fails to demonstrate that emissions data has been sufficiently monitored.	N/A – No compliance cost formally linked to the initiative	N/A – No compliance cost formally linked to the initiative
GHG Protocol – Product Life Cycle Accounting and Reporting Standard	No compliance system built into the initiative, apart from the proposed "assurance" (internal or external verification) provided through guidance in the Standard. Hence costs are associated with the standard cost of operational emissions verification.	Cost depends on the complexity of the verification scope (i.e. complexity of the product whose carbon footprint is being evaluated), the number of data sources being verified and the overall availability of data. Cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving.	N/A – No compliance cost formally linked to the initiative	N/A – No compliance cost formally linked to the initiative
Global Organic Textile Standard (GOTS)	Cost is linked to initial assessment and compliance monitoring.	Cost depends on the location, size and type of entity, and the type of product.	Annual certification cost and annual licence fee (for the right to use the GOTS logo on certified textile products).	Annual certification fee ranges from €1,200 to €3,000. Annual licence fee is €120.

Scheme	Sources of costs for operators/applicants	Drivers of costs	Scheme pricing system	Examples of prices
GS Mark	Source of costs: tests and audits (including for surveillance), the translation review of the installation and use manuals in German language can also be included; admissions fees; management of the certification: issue of the certificate and follow-up of the file; label management, including promotion in and outside Europe.	Each tariff depends on the certification body and on the product type.	No specific information apart from what is mentioned under sources of costs.	No comprehensive information publicly available. Indicative information from 2007 mentions average costs for a GS test of €3000-5000 (type of costs covered not specified); deemed insignificant compared to overall production costs.
International FAIRTRADE Certification Mark	Cost is composed of the demand for certification, the initial inspection, and the annual audits	The variable part depends on the number of working days required to inspect the producer group. A full Fairtrade audit can last from four days for a small producer organisation and up to six or seven weeks for the largest cooperatives. The time the auditor spends on the ground depends on the size of the producer organisation, its complexity, and the number of certified products it is seeking to sell.	Pricing is separated between producer and trader certificate fees. Basic annual fee which charges more in the first year and with the option for additional charges. Fees differentiate between small and large operators; and according to number of members in producer groups (more members, larger fee)	Prices for producer certificate fees vary according to 3 grades. The basic certification fee for Grade 1 organisations for the first 12 months varies from €1,430 to €3,470 according to the number of members. Following the first year, the annual fees range from €1,170 to €2,770. Additional fees are charged for additional products €180 and for the initial processing installation fee (from €210 to €620). For 2nd and 3rd grade organisations there is an initial central structure fee of €1,530. In the first year, a basic fee applies which varies according to the number of members (from €920 to €1,740). After the first year, this basic fee varies from €720 to €1,250. Additional fees are charged for additional products €180 and for the initial processing installation fee (from €210 to €620). For trader certificates, there is an application fee on €525 with additional charges for cotton social compliance (including document check at €52.50 and Social Audit €800 among three others). Annual certificate fees vary between large operators (€1,890) and small operators (€420). Additional charges exist where there is a large volume of product (€1,050) and additional product categories (€105).
Label LUCIE	The cost includes the initial training on ISO 26000 and the "Label LUCIE" standards, two evaluations and their reports (the initial audit and the 18-month evaluation), the license fee for the use of the label and the services from the LUCIE	Cost varies according to the size of the company	Annual fee and one-off fixed costs for training; variable cost for evaluation depending on the number of employees, the number of sites and the turnover of the company.	Initial training: €800 (fixed) Evaluation: variable cost for example, for a 20-person company: €4,200 for initial audit and €1,950 for the second evaluation. The license fee is a variable cost that amounts to

Scheme	Sources of costs for operators/applicants	Drivers of costs	Scheme pricing system	Examples of prices
	community			0.01% of the annual turnover with a lower limit of 1 000€ and an upper limit of €12,000 per year (for example, for a 20-person company: €3,000 for three years)
NF Mark / NF Service	Costs cover the review of applications, evaluations and compliance controls.	The cost associated with this compliance system depends on the product category.	Fixed joining fee and ongoing charges for audits and compliance controls.	Costs are set out in certification guidelines for specific product (groups). As an example, the costs for NF Childhood ("petite enfance") are as follows: • Cost of the examination of the application for certification: €1575 (excluding taxes) + €263 (excluding taxes) per product category • Cost of the audit: approximately €1471 (excluding taxes) per day (usually one to three days are needed of the audit) • Cost of quality surveillance: €1030 (excluding taxes) + €132 (excluding taxes) per product category + a €148 (excluding taxes) fee for using the mark.
Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC	Costs can be split into two categories, namely direct costs and indirect costs. Direct costs include certification fees and auditing costs. Indirect costs (admin and costs related to sustainability compliance) can vary greatly from one company to another and can lead to an increase in the product cost of up to 30%.	Membership fees are generally based on property size, amount of feedstock processed or yearly financial turnovers - dependent on the company profile and cannot be estimated with certainty	Annual membership fee with additional charges for certification and output.	Annual membership fee: €150-250 depending on the company's annual turnover. Certification fee: €50/site with reduced rate available for fourth site. Fee per metric ton of biomass: Ethanol, 0.027; FAME, 0.035; and Biomethane, 0.5.
Roundtable on Sustainable Palm Oil (RSPO)	The cost of the certification scheme is composed of the cost of the initial audit, the surveillance audits (once a year), RSPO membership fees, palm oil trading fees and trademark license compensations.	The cost of the audit depends on a variety of factors such as the size of the organisation or the certification body chosen for example.	See sources of costs for the different types. The annual membership fee varies according to membership type as set out in the examples.	Annual membership fee varies according to membership type: • Ordinary member: €2,000 • Ordinary member (small, <500 ha): €500 • Affiliate member: €250 • Supply chain associate: €100

5.2.2 Key factors having an influence on the cost of PEF/OEF verification

Based on the work presented in Chapter 5, major factors having an influence on costs were identified. A discussion on these factors is presented in this chapter.

1/ Level of assurance being sought

The primary factor having an effect on costs is the level of assurance expected from the verification activities. Reasonable assurance requires more thorough verification than limited assurance and as a consequence, the workload and associated costs also increase. This is mostly due to the for more evidences to verify a particular point and to related verification activities being more time-consuming (on-site audits, interviews, review of procedures etc. instead of basic documentary checks).

2/ Maturity of the internal procedures of the PEF/OEF reporting company

A company having well-established procedures in particular for data-collection, traceability and calculation, will be much simpler to audit than a company in which information is not collected and presented in a standardized way and disseminated in various departments.

For instance, a recommendation of the PEF guidance is to implement a data management plan. Although recommended, this is not a mandatory requirement. All other things being equal, there could be important discrepancies in the verification workload and related costs between a company having a data management plan and a company not having one.

3/ Requirements of the PEFCR

The level of stringency of the PEFCR regarding the mandatory use of particular generic data, the number of primary data, the complexity of requirements on e.g. additional environmental information – all these aspects will clearly have an impact on the cost of carrying out a PEF study as well as performing verification.

A PEFCR which has deliberately reduced the number of primary activity data to focus only on the most impacting aspects will have a positive influence on verification costs. Conversely, a PEFCR leaving room for interpretation on crucial aspects such as the reference flow, the scope of the study or the specific/generic data to be used can significantly complicate the verification and thus increase the verification costs.

A typical example of this latter point can be found in PCRs for TVs. In the French PCR, the surface of the screen is the key specific data to differentiate products. Companies can then use a generic life cycle inventory for screen manufacturing (expressed in cm^2 of screen). Thus, the two verifications are 1/ to check that the surface is correct, and 2/ the right LCI was used for screen impacts.

In the EPD system, the PCR simply states that "*TFT-LCD panel manufacturing and LCD module assembly*" should be taken into account in the system boundaries of the assessment of the environmental impacts of the manufacturing phase. This means that the number of verifications to be made in order to ensure that environmental data used for the screen are correct is potentially much higher than in the French system.

In most advanced fields with good LCA knowledge, the PEFCR requirements may be designed in such a way that room for uncertainty is very limited (this also point 5 below).

4/ One-shot verification or process "certification"

Given the rapid renewal of product ranges in some sectors, it is likely that certain companies will perform PEF studies repeatedly. In that context, a key factor to reduce the cost of verification would be to shift from a "one-shot" verification approach (where verifications are carried for each PEF-study) to a "built-in" compliance where the idea is to develop tools and procedures that ensure compliance with some of the PEF requirements that are not related to a specific PEF study. This possibility currently exists in the International EPD system through "process certification"[111] (see section 5.3.2). Similarly, if the tool used for the PEF study is an "official" EU tool (such has the SME tool to be developed by the EC for the PEF pilot) or could be a tool endorsed by the EU, most of the tool settings verification could be done once (i.e. when developing and testing the tool) and not for each PEF study.

5/ Maturity of PEF/OEF practice in a given field

The effect of the learning curve should also be considered. The more PEF profiles for a given product category will be publicly available, the easier the verification will become, and the costs will be reduced. Indeed, with numerous benchmark values available, it will be easier for verifiers to identify anomalous results (i.e. outliers) and pinpoint possible mistakes in input data or calculations. In addition, with an increasing number of PEF reports publicly available, overall knowledge on the key environmental issues of a given product category will increase which will help to focus verification activities on the crucial points.

5.2.3 Potential costs of PEF/OEF verification

The objective of this section is to provide a rough estimate of the costs (borne by operators) for the PEF/OEF compliance system. This estimation is made in the context of the detergents case study and is based on the following aspects:

- Price data collected for existing schemes (see Table 15);
- Assumptions on the general context in which the company operates;
- Additional information collected from AFNOR on the costs borne by operators under the European Ecolabel scheme in France as well as general rules of this scheme at European level.

Key assumptions and related costs estimations are presented in Table 17.

[111] The International EPD® System, 2013. General Programme Instructions for the International EPD® System 2.01

Table 17: Tentative costs for operators/applicants

Type of cost	Cost Estimate	Comments
Assumptions on context		
> A medium-sized company operating in Europe. > The company designs and manufactures the product in a unique industrial facility > The product is a detergent and a PEFCR has been developed for this product category. > Third-party verification is required. The level of verification implemented is "Level 2 – Limited assurance", as defined in section 5.1.3; > Appropriate internal procedures for data management within the company (see section 5.2.2); > "One-shot verification" approach (see section 5.2.2).		
Assumption on cost structure		
One-time application fee	~€500	Reasonable assumption based on Table 15. Possible range depending on company size€ 300 – €1500 (inspired by Ecolabel in France)
Annual fee (not including certification costs)	~€2,000	Reasonable assumption based on Table 15. Possible range depending on company size€200 – €10,000 (inspired by Ecolabel in France for lower limit and from EU rules for upper limit: in theory up to €25,000 for Ecolabel)
Certification costs (one-shot, i.e. one product)	>Verification activities based on documentary checks ~€5000 > One-day audit in operator premises ~€2,000	> Based on BIO experience in the field of environmental labelling and critical review: 3 to 5 days. > Based on information from AFNOR and auditors. This cost includes the audit preparation, the one-day visit, and post-visit tasks. Note that a major unknown is the number of additional visits to other actors in the supply chain (such as suppliers) that may be required. This depends on the supply chain structure (e.g. does the company produce itself the detergent or is produced by a supplier?)

5.3 Possible directions for the future PEF/OEF compliance system

Complementary to the operational options presented in section 5.1.3, the present section proposes three possible directions for the future compliance system that could be applied to PEF and OEF declarations.

5.3.1 Four dimensions to differentiate compliance systems

Firstly, four main dimensions characterising the design of a compliance system were identified from the review of existing schemes. These dimensions were retained as they are considered as the most effective to differentiate schemes.

- Approach for verification activities
  - Balance between ex-ante and ex-post verification;
  - Level of involvement of third-parties: no third party, third party under certain conditions, systematic third-party verification;
  - Definition of control points: risk-based approach (i.e. focus on requirements where the probability/gravity of non-compliance is higher) or other approach (e.g. exhaustive controls).
- Verifiers "ecosystem"
  - Level of interaction between verifiers and scheme owners, ranging from: 1/verifiers are part of the staff of the scheme owner (e.g. in the case of Green Seal) to 2/coordination of verifiers delegated by the scheme owner to other competent authorities (e.g. in the case of EU policies);
  - Functioning of the certification market for a given scheme, ranging from 1/ open to any certification body but regulated through accreditation to 2/ monopole of one certification body.
  - Functioning of the accreditation market for a given scheme – i.e. several possible accreditation bodies or a single accreditation body for all authorised certifiers.
- Product/sectoral structuring
  - Product/sector coverage of the scheme and related adaptations of the compliance system to a product or a sector, ranging from: 1/ a single type of compliance system for all the products/organisation to 2/ the possibility to have various modules (i.e. sub-systems of compliance) within an overarching compliance system (e.g. CE marking).
  - Value chain coverage and type of operators submitted to verification: producers only, producers and traders, marketer (i.e. entity putting the product on the market).

- Governance and stakeholder involvement
  - Level of involvement of players/stakeholders in the development of the scheme requirements and in their translation into verifiable control points.
  - Possibility for private parties to propose new products (e.g. Blue Angel, NF Environnement) or verification procedures (e.g. RED) under a scheme.

In addition, a cross-dimensional aspect relates to the general "attitude" adopted by the scheme owners and verifiers towards operators. Verification controls can be performed as part of a learning and continuous improvement process, aiming at improving the compliance of an entire sector and at convincing all the players of the benefit of being compliant. On the other hand, verifications can be performed in a more regulatory mind set, with an aim to remove from the market the worst performing products and the "freeriders".

Box 2 – About the risk-based approach for verification activities

The overall objective of a risk-based verification approach is to prioritize verification efforts by assessed risks. It is based on a risk assessment aiming at identifying and rating risk factors. Risk-assessment can play a role at different levels in compliance systems.

1/ Risk-based approach can be used to select the overall design of the compliance system – i.e. in case of PEF/OEF, the choice of "directions" as presented in section 5.3.2

Based on the level of risk associated with non-compliance for a given product/sector, the nature and intensity of verification activities will be adapted. The key idea here is to put more emphasis on the verification of products/sectors where a false declaration would have bigger consequences.

For instance, in quality/safety schemes, the consequences of non-compliance are more serious for products such as motorcycle helmets or ladders than for office products. In the case of PEF/OEF, a false (underestimated) environmental footprint declaration would not lead to safety issues but consequences in terms of environmental impacts may be higher in the case of a vehicle or a household appliance (energy consumption during use phase, bigger environmental impacts) than in the case of an office product such as a pencil.

Therefore, depending on the product category and its risks, the compliance system used within a given scheme can differ: for products with minimal risk, an option would be self-certification whereas for products with greater risks, possible options would be tests, audits or third-party certification.

2/ Risk-based approach can also play a role in the definition of operational verification activities – i.e. definition of control points and/or procedures for verifiers as presented in section 5.1.3

Even once the overall design of the scheme has been defined and requirements clarified, risk-based approach can drive the operational checks performed by the verifier.

Typically, an auditor may start its audit with a risk-assessment step, considering numerous factors including current and prior audit experience of the verified company, sufficient or poor internal controls on processes and tools used for data sourcing, collection, management and reporting. This step is key to determine the verification approach. The objective is to focus on control points related to requirements where the probability of non-compliance is higher in order to optimize the balance between the level of assurance/ reliability of the verification process on the one hand and time/costs on the other hand.

In addition, the auditor must take into consideration the risks that the verification activities are not properly done. A risk assessments can be done in order to identify, in the verification procedure, the elements that could potentially affect the quality of the outcome of the verification processes (see table below for illustration). Based on this analysis of "verification risk", aspect such as the minimum competence standards needed by verification activities can be defined.

Activities	Associated risks	Impact on the project	Minimum competence standards needed
Review of LCA methodology	Allocation rules not properly checked	Wrong conclusion	Methodological review done by an experienced LCA verifier
Verification of data traceability and reliability – review of data monitoring and tracking systems	Insufficient audit sample	No possible conclusion on the reliability of the profile	Validation of the audit sample before the verification work by an expert in environmental verification (more than 5 year of verification practice)

5.3.2 Proposed directions for PEF/OEF compliance system

Note that the order of presentation below does not reflect prioritisation.

1 – Strengthening existing system for PEF/OEF

Proposition 1 is based on existing PEF/OEF guides – section on critical review –, the GHG protocol approach, and the feedback from the Quebec[112] pilot on product carbon footprint. This proposition is applicable to any type of scheme.

Approach for verification activities

- Verification activities are performed ex-ante possibly during or at the end of the PEF/OEF study;
- Systematic third-party verification;
- The general verification procedures/rules are defined at EU level[113].

Verifiers "ecosystem"

- For all public declarations (either with or without comparative claim) a review team is built up and includes:
  - a critical reviewer who is in charge of checking the compliance with the methodology – i.e. PEF/OEF guides and relevant PEFCRs/OEFSRs;
  - an auditor is in charge of checking the proofs related to the specific data (i.e. generic data) used in LCA calculations. If required the auditor has the right to audit other operators in the value chain (e.g. suppliers);
  - an LCA practitioner (which can be the critical reviewer) that will carry out verification of the LCA tool used by the reporting company for the calculations.
- For studies with a comparative assertion to be disclosed to the public, an expert of the sector/product under consideration must be integrated into the review team. In particular for cross-checks of data (i.e. ensure the plausibility of certain technical data such as the energy consumption of a production process) based on his/her knowledge of the sector.

[112] This pilot included specific work on verification activities (critical review and audits).

[113] The development of verifications rules can involve stakeholders through a public consultation. Rules can be developed by the Commission or by another entity to which the Commission has delegated this responsibility.

Value chain coverage and type of operators submitted to verification

- Operators required to undergo the verification are in priority the entity putting the product on the market). When first-hand information is a requirement of the PEFCR/OEFSR, the verification may require contacting tier-1 (or higher tiers) suppliers/subcontractors in the supply chain, until auditable information is found.

Governance and stakeholder involvement

- Companies and other stakeholders can be involved in the development of PEFCRs/OEFSRs, and possibly in the development of associated verification procedures (definition of specific control points for each product/sector category).

2 – Limited involvement of public authorities

Proposition 2 is partly inspired by the Australian NGER scheme as regards to the strong balance towards surveillance activities, and by the EU Renewable Energy Directive as regards the rules developed by industry. In this proposition, the involvement of public authorities remains limited with the view of limiting costs borne by public authorities. Public authorities focus on surveillance and operators themselves define the operational rules.

Approach for verification activities

- No systematic ex-ante verification before declaration.
- Strong balance towards surveillance activities of PEF/OEF declarations. Verification is initiated by:
  - Suspicions public authorities may have regarding a PEF or OEF declaration;
  - Complaints or concerns expressed by stakeholders (citizens, NGOs, companies) through a dedicated procedure;
  - Product/sector-dependent risk approach (inspired by CE marking):
    - The nature and intensity of verification activities will depend on the product category/sector, based on the risk associated with non-compliance. The idea here is to put more emphasis on the verification of PEF/OEF declarations where a false declaration can have bigger consequences for EU consumers and society as a whole[114].
    - The seriousness of a false declaration could be assessed based on the size of the market, the average environmental impacts of the product category, and the existing EUP/MEErP studies.

[114] An illustration of this is that the gravity of a false PEF-profile may be lower in the case of a pencil than in the case of a vehicle or a household appliance (energy consumption during use phase, bigger environmental impacts). The approach here is similar to product safety schemes where the consequences of non-compliance are more serious for products such as motorcycle helmets or ladders than for office products for instance.

    - It is specified in PEFCRs/OEFSRs which verification instruments are employed for each particular product category or sector.
- Operators could be required to publish a self-declaration of conformity.

Verifiers "ecosystem"

- Surveillance verifications are performed by experts accredited by national accreditation bodies and registered by public authorities. Experts must prove their skills and experience to be accredited.
- Ex-ante verification activities (conformity assessments) are performed internally by the operators[115]. Control points are sufficiently clear so that there is no need for verifiers to have strong qualifications in the field of LCA methodology.

Governance and stakeholder involvement

- General requirements for PEF/OEF declarations are provided in PEFCRs and OEFSRs.
- To demonstrate compliance with these criteria, operators of the corresponding sectors can develop voluntary "compliance procedures" that can be recognised by the EC. These procedures provide more detailed rules and clarify control points to prove compliance during conformity assessments. When relevant, the procedures include specific rules to ensure the traceability along the value chain.

Proposition 3 – Certification cycles

This proposition is inspired from schemes using a certification cycle (Fairtrade, FSC, etc.) as presented in section 3.3.2.

Approach for verification activities

- The compliance system is based on certification cycles with initial certification and surveillance through monitoring and renewal activities.
- The period of validity of the certification and the types of operators in the value chain that need certificates depend on each product category/sector.

Verifiers "ecosystem"

- Certifiers are accredited independent third parties.

Governance and stakeholder involvement

- Certificates are not awarded for a specific PEF declaration related to a given model but rather as a proof that the company is authorised to make PEF declarations on any models it may produce in a given product category.
- The general verification procedures/rules are defined at EU level.

[115] by individuals that are independent from the team which performed the PEF/OEF study.

Complementary option for Proposition 3 – "Process certification" instead of "one-shot verification" (inspired by the international EPD system)

For companies performing PEF (respectively OEF.) studies on a regular basis and consequently producing numerous PEF profiles (for instance, when the same base product exists in various colours, sizes, materials, with additional improvements, etc.) there is a need to simplify and shorten the verification process for a given PEF study.

In order to meet these needs, the compliance system could include the possibility for the company carrying out the PEF study to perform the verification procedure itself, with the intervention of an internal verifier (being independent from the team performing the PEF study). Therefore, PEF declarations could be issued without a third-party critical review being performed each time.

The underlying idea is that if PEF studies are performed repeatedly, the company will naturally implement internal procedures for data collection, calculations and development of PEF declarations. In this context, the purpose of the "Process certification" is to have these procedures verified by an independent third party. The process certification assessment takes the form of a quality assurance check of the internal competence and skills in an organisation to:

- Conduct the calculations according to the reference PEFCR and PEF guidance;
- Issue PEF declarations according to the reference PEFCR , and PEF guidance;
- Have procedures and workflows that ensure sufficient reassurance on the reliability of the PEF profile.

This process certification could be performed annually by an accredited verifier, regardless of the number of PEF studies carried out during the year by the company.

Chapter 6. Conclusion

6.1 Key learnings

6.1.1 Findings of the review of existing schemes

- **A diversity in existing schemes, which in turn favours a diversity of compliance systems**

Among the initial list of 27 schemes a wide diversity was observed in terms of:

- Scope – Product-or organisation-oriented scheme
- Topics – Environment, social, quality, safety, etc.;
- Regulatory framework – Voluntary initiative, mandatory policy;
- Scheme owners – Private or public schemes;
- Geographical coverage – national, EU, international.

The cross-analysis focusing on the design of the compliance systems also showed a wide variety of features, as summarized in the table below.

Table 18: Summary of possible features observed in compliance systems

How are the rules of the scheme structured?					
Requirements for operators:	Standalone document	General Principles and national versions	Generic standards and product standards	No generic standard, product-specific requirements only	Requirements written in law
Guidance for operators	Additional guidance provided by the scheme owner		Certifiers explain to operators how they work and how they will assess compliance with the standards.		
Guidance and requirements for verifiers	Requirements and/or guidance can be developed for third-party verifiers. Requirements for certifications bodies available In some cases, such procedures are intentionally not made publicly available				
Stakeholders involved in the development of the requirements	Any actor interested in entering the scheme can propose requirements	Procedures for standards development and revision based on identification and consultation of affected stakeholders as well as possible public consultations		Voluntary schemes recognized by institutions (Case of the RED)	
How are verification activities carried out?					
Parties involved in verification	**First-party verification**	**Third-party verification**			
	First-party verification possible, under certain conditions	The owner of the scheme is the certifier	The owner of the scheme created a separate entity for certification	Verification activities carried out by an independent registered certification body	
Scope of the assessment	Focus on the product itself and its measurable technical characteristics Schemes tackling issues related to quality or safety		Verification of characteristics that are mostly invisible in the final product In schemes related to sustainability issues, verification activities have to cover the entire value chain including the producers and the traders.		

Balance between ex-ante and ex-post verification activities	Thorough initial conformity check but no follow-up	No prior third-party verification required before declaration but checks in case of suspicion	Certification cycles
What is the governance of the compliance system?			
Governance: who has authority and decision-making power?	In certain EU policies schemes, a competent authority implements its own compliance system in each Member State. The final decision on the compliance or non-compliance of an operator is made at the national level. In international voluntary schemes such, an important emphasis is made on the governance structure. It is essential for the credibility and transparency of such schemes that the power remains balanced between sectors, regions, and private and public interests.		

Several factors play a role on a compliance system's reliability

Factors increasing the reliability of a compliance system are listed below. It must be underlined that a single factor on its own cannot make a scheme reliable or unreliable. Instead, a given factor plays a role in the overall reliability, while interacting, influencing and being influenced by other factors.

Table 19: Factors increasing the reliability of a compliance system

Name	Higher reliability
Reference / compliance with international verification standards	The scheme explicitly refers to one or several standards of the ISO 17000 series
Initial conformity assessment	The initial assessment includes documentary check, testing when relevant, audit, interviews, etc. The initial assessment also applies to the supply chain.
Surveillance	Surveillance is undertaken every year with a complete analysis (similar to initial assessment).
Intervention of a verifier	External and accredited verifier required.
Validity of the proof of compliance	The proof of compliance is valid for a limited and short time (e.g. one year).
Flexibility	The standards are adapted to the type of products, the type of operators using the scheme (small producers, traders, etc.), the operators have a period to remedy instances of non-compliance. The verification procedure and its costs are adapted to the type of operators and their means (in terms of human or economic resources).
Transparency	The standards, the verification guide and requirements, information on complaints and their resolution, the costs, the cases of misuse are available and highly transparent.
Traceability	There is a considerable effort regarding traceability, records are kept for a defined time (more than 5 years), a control system for the verification of compliance and traceability is implemented along the supply chain.
Management of invisible characteristics	There is an in-depth verification of embedded/invisible impacts: the verification includes on-site inspection of supplier sites and interviews of stakeholders.
Consequences of non-compliance and misuse	Misuse can lead to sanctions such as fines or prosecutions. The operator has to correct the non-compliance in a determined time frame.
Governance	The scheme is developed and implemented by a multi-stakeholder organisation with various interests represented (e.g. NGOs, companies, associations, etc.).
Recognition	The label is internationally known and recognised to be reliable and credible.

High certification success rates are commonly observed

This can be explained by the attitude adopted by the scheme owners and verifiers towards operators: verification controls can be performed in the spirit of learning and continuous improvement, aiming at improving operator practices and giving time to take into account observations made by verifiers.

Although observed success rates are high, most of the operators undergoing a certification process have to provide corrective measures. The share between minor and major corrective measures varies according the schemes.

- **De-certification due to a complaint remains rare.**

  Complaints procedures initiated by third-parties appear to have relatively limited overall impact on de-certification but they are essential for the scheme's credibility and transparency.

6.1.2 Findings of the WTO rules analysis

- **WTO contains a number of disciplines that may be of relevance for an EU PEF/OEF scheme; which ones will, however, depend on the binding/non-binding nature of such schemes**

  The most important rules are contained in the TBT Agreement and the GATT.

  In light of recent WTO case law, regulatory measures that do not force economic operators to disclose and communicate a PEF-profile (i.e. the results of a PEF study) of their products, but only allow them to make certain claims related to their products' environmental footprint if they use the EU PEF scheme (including its compliance system), would have to be considered a technical regulation under the TBT Agreement.

- **WTO law is not addressed at private actors**

  Any private scheme laying down requirements for products or organisation, but not linked to mandatory legal rules is not subject to any specific WTO obligations

  This applies by extension to compliance systems that are part of such schemes.

- **For EU measures on OEF, WTO law will only become relevant to the extent that these schemes have a trade component**

6.2 Recommendations

- **Implement the following best practices:**

  Terminology

  - Use and refer to applicable ISO standards and CE regulations definitions.

  Design and structure of the requirements of the scheme

  - Develop generic standards and product/sector standards.
  - Develop additional guidance for operators.
  - Develop guidance and requirements for verifiers (e.g. clarifying control points).
  - Involve all interested parties in the development of requirements.

  Verifications activities

  - Adjust the "intensity" of verification performed depending on:
    - the level of risk associated with non-compliance, (similar approach as, for instance, in quality/safety schemes);
    - the level of reassurance being sought to ensure the overall credibility of the scheme, for instance in sustainability-related voluntary schemes;

- the existing constraints in terms of costs, resources, available techniques, etc.

- Prefer third-party verification whenever required (i.e. linked with the required intensity of verification).

Governance of the compliance system

- Governance of the scheme must favour multi-party involvement (important for scheme acceptability, credibility and recognition).

- **Use jointly three levers for providing reassurance on PEF/OEF declarations**

The examination of the control points related to PEF/OEF requirements as well as the analysis of the illustrative verification activities based on existing PCRs revealed that there are three major levers to provide reassurance in the results of a PEF or OEF study. However, none of these levers is sufficient in itself to give confidence in the results of a PEF or OEF study.

Therefore, the key principle driving the development of the options is that the best approach for shall be a balanced mix of activities related to each lever: 1/ LCA rules and underlying assumptions 2/ the data reliability and traceability, and 3/ how these two aspects are transcribed in the LCA tool.

- **Use jointly three levers for providing a reassurance on PEF/OEF declarations with a proper balance between cost/simplicity/stakes/reliability**

Proposed options were derived from the concept of "limited assurance" and "reasonable assurance". The concept is also increasingly used for non-financial verification, as for instance in CSR report auditing. Through each level of verification, a certain level of confidence in the results is sought. The more intense the verification, the higher the level of confidence should be at the end of the verification process.

In the context of testing verification processes (pilots), the best option would be "level 2 Limited assurance" (cf. Table 14). It can be seen as achievable first step with a proper balance between cost/simplicity/stakes/reliability

- **Recommendation for the global design of the future PEF/OEF compliance system**

Given the diversity of products and sectors to be covered by PEF/OEF compliance system, it is recommended to develop a "meta compliance system" that can accommodate various systems and in particular the three following possible directions:

- Strengthening existing system for PEF/OEF
- Limited involvement of public authorities
- Certification cycles

The directions/systems to be selected depending on product categories/sectors and based on a risk analysis.

Annex 1. Involved stakeholders

Table 20: List of involved stakeholders

Organisation	Presentation	Interviewee	Interview date
DGCCRF[116]	DGCCRF is the French authority in charge of the market surveillance. DGCCRF has been involved in the French Pilot project on environmental labelling to identify possibilities of controlling future communications to consumers on product environmental footprint.	**Sophie Jaffrezo** (sophie.jaffrezo@dgccrf.finances.gouv.fr) Investigation on environmental claims **Emilie Maire** (emilie.maire@dgccrf.finances.gouv.fr) Investigator – National Investigation Service **Jean-Claude Thomas** (Jean-claude.THOMAS@dgccrf.finances.gouv.fr) Investigator – National Investigation Service	19/04/13
Danone	Danone is a French food-products multinational corporation and a world leader in fresh dairy products and bottled water. Danone France performs environment footprints of some of its products but does not communicate publicly the results for specific products.	**Jean-Christophe Bligny** (jean-christophe.bligny@danone.com) Environment Scientific Affairs Director **Laura Palmeiro** (laura.palmeiro@danone.com) Nature Financial Director	22/04/13
AFNOR Certification	AFNOR certification is a branch of AFNOR group. AFNOR is involved since 2008 in the implementation of the French ecolabelling scheme. AFNOR Certification is a leading assessment body for services, products and competencies in France and worldwide. The AFNOR group's Certification branch handles the two well-known quality marks: AFAQ and NF.	**Eric Laurençon** (eric.laurencon@afnor.org) Business area manager in charge of the development of the NF mark and official labels – Innovation and Development Department	26/04/13
AFNOR Certification		**Franck Pinguet** (franck.pinguet@afnor.org) Business area manager in charge of certification, assessment and qualification – Innovation and Development Department franck.pinguet@afnor.org **Benoît Phuez** (benoit.phuez@afnor.org) Product manager – Innovation and Development Department	24/04/13
LNE	LNE is the French national laboratory for metrology and testing. LNE also offers certification services.	**Virginie Desbordes** (virginie.desbordes@lne.fr) Program Manager – Department of certification and training **Pascal Prudhon** (pascal.prudhon@lne.fr) Business area manager in charge of multi-sectoral certification – Direction of certification and training	24/04/13 and 26/04/13
JEMAI	Japan Environmental Management Association for Industry (JEMAI) is a public corporation in charge of the Ecoleaf scheme.	**Hanako Negishi Priestnall** (negishi@jemai.or.jp) Operator of Ecoleaf	04/13

[116] French general directorate for fair trading, consumer affairs and fraud control

Organisation	Presentation	Interviewee	Interview date
InVivo	InVivo is the number-one French cooperative group. It brings together 241 farming cooperatives member. InVivo performs environmental footprint calculations of food products and is involved in the French labelling scheme as an active stakeholder of the sectoral working group on food products.	**Antoine Poupart** (APoupart@invivo-group.com) Deputy Chief of Service Sustainable agriculture and development **Florence Foucher-Chevrollier** (FFOUCHER@invivo-group.com) Sustainable Development Management System – QHSE department	16/05/13
Quebec ministry of Finance and Economy	The Quebec ministry of finance was mandated to put in place in 2012 a pilot project on product carbon footprint. The pilot includes 12 companies that quantify the carbon footprint of one or more of their products. The pilot includes specific work on verification activities (critical review and audits).	**Maxime Alexandre** (maxime.alexandre@economie.gouv.qc.ca) Advisor for Industrial development – Climate change Department of green technologies and service companies	22/05/13
Deloitte	Deloitte, is one of the Big Four professional services firms. Deloitte provides external verification services for CSR reporting.	**Eric Dugelay** (edugelay@deloitte.fr) Corporate Responsibility & Sustainability Services Leader, Europe, Middle East & Africa **Julien Rivals** (jrivals@deloitte.fr) Director - Sustainability Services	27/05/13
FSC France	FSC France is the representative body of FSC in France.	**Marie Vallée** (marie.vallee@fsc-france.fr) Director FSC France	29/05/13
RAL gGmbH	RAL is a certification body. In particular, RAL gGmbH is responsible for awarding the Blue Angel ecolabel. RAL gGmbH checks the product compliance with the Basic Award Criteria of the label.	**Henning Scholtz** (henning.scholtz@ral-ggmbh.de)	June/13
Intertek	Intertek is a multinational inspection, product testing and certification company	**Laurent Lebarq** (laurent.lebarq@intertek.com) Supplier Management & Environmental services Intertek Business Assurance	July/13
Bureau Veritas	Bureau Veritas is a multinational inspection, product testing and certification company	**Etienne Casal** (etienne.casal@bureauveritas.com) Vice President Certification Business Line	July/13
Ernst & Young	Ernst & Young, is one of the Big Four professional services firms. E&Y provides external verification services for CSR reporting.	**Eric Mugnier** (eric.mugnier@fr.ey.com) Partner Cleantech & Sustainability Services	July/13
Orange & PricewaterhouseCoopers	Range performs environmental footprint calculations of mobile phones and is involved in the French labelling scheme. PWC supported Orange in the verification of the provided by phone manufacturers used for the environmental labelling.	**Olivier Laurent** (olivier.laurent@orange.com) Sustainable development manager Orange - Devices	July/13

Annex 2. "Descriptive" factsheets (27 schemes)

Australian National Greenhouse and Energy Reporting (NGER)

<table>
<tr><th colspan="3">Australian National Greenhouse and Energy Reporting (NGER)</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">This is a legally enforced reporting used to support Australia's GHG inventory and international reporting requirements. Audits are not systematically conducted but can be initiated by the authorities for any reason. There is a clearly stated and legally supported right of the Regulator to decide how severe to be with non-compliers.
Official website:
http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/Pages/default.aspx</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Carbon reporting</td><td rowspan="2">Corporations that meet a threshold are required to report their GHG emissions on an annual basis. This data is used to document government progress on GHG reductions in the frame of national and international reporting (relating to Kyoto targets and subsequent national strategies, policies and legislation). The data gathered underpins the Australian emissions trading scheme.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment (GHG emissions)</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td><td rowspan="2">The reporting concerns emissions within one company, if it emits more than a certain threshold. There are two types of thresholds to determine which corporations are required to report on a mandatory basis: facility thresholds and corporate group thresholds. Both the facility and corporate group thresholds have three components:
▪ a greenhouse gas emissions threshold;
▪ an energy production threshold; and
▪ an energy consumption threshold.
Corporations must look at each threshold to determine their obligations under the NGER Act. If a corporation meets or exceeds one or more of the thresholds for a reporting year, it must register and report for the first year a threshold is reached. It must then report for each year the corporation remains registered.
Facility thresholds are 25 kilotonnes (kt) or more of greenhouse gases (CO_2 eq.); production of 100 terajoules (TJ) or more of energy; or consumption of 100 TJ or more of energy.
Corporate group thresholds decreased each year for the first three reporting years of the NGER scheme. In 2010–11 and onwards: 50 kt or more of greenhouse gases (CO_2 eq.), production of 200 TJ or more of energy, or consumption of 200 TJ or more of energy.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>Public authorities own this scheme. The Greenhouse and Energy Data Officer on behalf of the Department of Climate Change and Energy Efficiency administered this scheme until the 1st of April 2012, when the Clean Energy Regulator took on that role.
The Clean Energy Regulator is the Government body responsible for administering legislation that will reduce carbon emissions and increase the use of clean energy. As a statutory authority, it operates in accordance with the legislation. The Clean Energy Regulator is accountable to the Minister of Climate Change and Energy Efficiency and to the Parliament.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>There is no requirement for a systematic third-party verification of the GHG emissions disclosed by companies. However, public authorities can demand that audits be conducted.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>Reporting is required for some indirect impacts (e.g. indirect emissions from purchased energy).</td></tr>
</table>

Context and scheme status	
History and future developments	This scheme is currently in use. The National Greenhouse and Energy Reporting Act (NGER Act) was introduced in 2007 as a single national framework for reporting and disseminating company information about greenhouse gas emissions, energy production, energy consumption and other information specified under NGER legislation. It continues to be enforced by the Clean Energy Regulator. Since 2007, certain aspects of the reporting requirements have been modified to comply with other climate policies that require up-to-date information related to GHG emissions levels.
Stakeholders	The Department of Resources, Energy and Tourism administers another reporting programme (the Government Greenhouse Energy Reporting – GGER). Therefore, this department is working with the Clean Energy Regulator to streamline reporting of common data items with the NGER system through the Online System for Comprehensive Reporting (OSCAR), which is a web based data tool for business to record energy and emissions data for Government program reporting. The Clean Energy Regulator has established a register of auditors. The Register is available to corporations that want to self-audit using registered greenhouse and energy auditors. The Clean Energy Regulator also uses the services of registered auditors. Registered auditors must continue to meet the eligibility requirements detailed in the National Greenhouse and Energy Reporting Regulations 2008 (the NGER Regulations) to maintain their registration. Registered auditors are individuals (not companies) working in companies such as Ernst & Young, Deloitte, PWC, etc.
Scope	
Targeted products/sectors	The scheme's mandatory elements are aimed at corporations in any sector that meet or exceed the threshold.
Scope of the assessment	The reporting concerns emissions within one company, if it emits more than a certain threshold. The scope of the mandatory reporting is equivalent to scopes 1 and 2 of the GHG Protocol Corporate Standard.
Geographical scope	Australia
Companies using the scheme	
Currently, there are more than 800 corporations registered and expected to report under the NGER Act for the 2011-12 reporting year. Examples of companies using this scheme include: BP Australia investments, Goodyear Australia, General Motors Australia, Hewlett-Packard South Pacific Pty Ltd, Rio Tinto Limited, etc.	
Link with other schemes, link to ISO standards or other standards	
The NGER (2008) Guidelines refer to ISO14064-1 and the GHG Protocol Corporate Standard. The Department of Climate Change and Energy Efficiency also developed a framework for Greenhouse and Energy audits. This framework sets out specific requirements for registered greenhouse and energy auditors to follow under the NGER Act. It draws from existing standards; including the standard ASAE 3000, the auditing standard AUS 904, and ISO 14064-3.	
Public information	
The regulations that sit under the NGER Act can be accessed at: http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/Legislation-and-regulations/Pages/default.aspx Published information on this website includes: ▪ The Register of Greenhouse and Energy Auditors ▪ Corporations registered and expected to report under the NGER Act for the current reporting year ▪ Reported greenhouse and energy information by year ▪ Several guidelines documents: ▪ > National Greenhouse and Energy Reporting Guidelines ▪ > National Greenhouse and Energy Reporting Technical Guidelines ▪ > National Greenhouse and Energy Reporting Audit Determination Handbook	

General features of the compliance system
Records of activities must provide the Clean Energy Regulator with adequate evidence of a registered corporation's compliance with the legislation. This includes information that can be used to verify the relevance, completeness, consistency, transparency and accuracy of reported data during an external audit. Corporations are encouraged to record both the decision making process and the details of the calculation and data analysis methods used for greenhouse gas emissions and energy production and consumption. This process is described in the National Greenhouse and Energy Reporting Guidelines. The Regulator monitors compliance with the climate change laws to determine levels of compliance and identify trends in behaviour; detect possible contraventions; identify whether, and what type of, education and/or enforcement action may be required; assess the effectiveness of its operations and programs; and identify opportunities for improvement. Compliance monitoring may occur through: checking of information provided in applications under the various legislative schemes and to the Registries; analysis of information reported by persons and organisations; analysis of information from other sources, such as the general public, peak bodies and industry groups, non-government organisations, other government agencies and international organisations; analysis of information obtained under the Regulator's information gathering powers, inspections, and audits. Entities must apply to the NGER to become registered auditors. They must meet a certain number of eligibility criteria before they can complete audits. The NGER Act provides a number of circumstances in which the Clean Energy Regulator might initiate a greenhouse and energy audit: ▪ **When there is a suspected breach of the legislation** The Regulator can require a corporation to be audited if it has reasonable grounds to suspect that a registered corporation has not met, is not meeting, or proposes not to meet its obligations under the legislation. After receiving a written notice from the Regulator, a corporation may appoint a greenhouse and energy auditor of its own choice (unless the Regulator specifies in the notice that a particular auditor is to carry out the audit). The corporation pays for these audits. As these audits occur in cases where the Clean Energy Regulator suspects non-compliance, an audit may be undertaken as a precursor to the application of enforcement measures, including investigations by authorised officers, civil penalties and criminal proceedings. ▪ **General compliance strategy** The Clean Energy Regulator may initiate audits for any reason (i.e. without necessarily suspecting non-compliance). For example, the Clean Energy Regulator may initiate audits on a risk management basis. It may also initiate an audit to gather information on the regulated community's compliance with particular aspects of the NGER Act. The Clean Energy Regulator will notify the audited body prior to commencement of the audit engagement [sections 74 and 74A of the NGER Act]. The Regulator pays for these audits. ▪ **Voluntary audit** Corporations may also want to initiate an audit on a voluntary basis in order to obtain a level of assurance that it complies with its obligations or to inform potential investors or customers.
References
▪ Clean Energy Regulator website http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/Pages/default.aspx ▪ Australian Government – Department of Climate Change, 2008. National Greenhouse and Energy Reporting Guidelines ▪ Australian Government – Department of Climate Change and Energy Efficiency, 2012. National Greenhouse and Energy Reporting System Measurement – Technical Guidelines for the estimation of greenhouse gas emissions by facilities in Australia (applies to the estimations of emissions in the 2012-2013 reporting year). ▪ Australian Government – Clean Energy Regulator, 2012. National Greenhouse and Energy Reporting – Audit Determination Handbook ▪ ISO 14064-3:2006 – Greenhouse gases – Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions ▪ Auditing and Assurance Standards Board, 2007. Standard on Assurance Engagements ASAE 3000 – Assurance Engagements Other than Audits or Reviews of Historical Financial Information ▪ Auditing & Assurance Standards Board of the Australian Accounting Research Foundation, 2002. Auditing Standard AUS 904 (July 2002) – Engagements to Perform Agreed-upon Procedures

Blue Angel (Blauer Engel)

Blue Angel (Blauer Engel)		
Brief presentation		
Blue Angel is a Type I Ecolabel in line with the ISO 14024 requirements. It covers a wide range of environmental issues. Supported by German institutions, it has international respect and recognition. The label is awarded to products once compliance against product category-specific requirements has been verified by RAL gGmbH. **Official website:** http://www.blauer-engel.de/en/index.php		
Key features		
Nature of the scheme	▪ Type I Ecolabel	The Blue Angel considers itself as a market conformity instrument of environmental policy designed to distinguish the positive environmental features of products and services on a voluntary basis. Blue Angel has four protection goals: climate, water, resources, and environment and health. The logo includes a specific inscription for each of the key protection goals (i.e. "protects the climate", "protects the water", "protects the resources", "protects the environment and the health"). The Blue Angel label shows that a product has better environmental/health performance. It aims to encourage better purchasing decisions (whether as an individual or as a procurer in private or public organisation).
Thematic area	▪ Environment (climate, water, resources, environment and health)	
Scope of the scheme	☒ Product ☐ Organisation	The reporting concerns emissions within one company, if it emits more than a certain threshold for 120 product categories
Regulatory framework	☒ Voluntary ☐ Mandatory	Although voluntary, the Blue Angel has a strong international reputation due to its credibility and competence, its objective criteria, its institutionalised award process and its German government base.
Scheme owner	☒ Public ☐ Private	The German Federal Ministry for the Environment Nature Conservation and Nuclear Safety (BMU) is the owner of the Blue Angel ecolabel and has the responsibility for the use of the label as a reliable product information
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	RAL gGmbH is responsible for awarding the Blue Angel ecolabel. RAL gGmbH checks the product compliance with the Basic Award Criteria of the label.
	Invisible characteristics Yes ☒ No ☐	According to the product category, some requirements can relate to invisible impacts, in particular when addressing production or end-of-life management aspects. For instance, a requirement for products made from recycled plastics is that the percentage of recycled plastics (post-consumer material) in the finished products be at least 80 percent. To prove compliance, the applicant shall provide verification of the origin and composition of the recycled plastics used by means of a certificate (including report) according to the EuCertPlast certification scheme[117].
Context and scheme status		
History and future developments	Created in 1978, the Blue Angel is the first and oldest environment-related label for products and services in the world. The Blue Angel was implemented on the initiative of the German Federal Minister of the Interior as a supplementary market-based (conformity) tool to regulation, providing incentive to go beyond regulation. The Blue Angel objectives are now split into four main areas of environmental protection: climate, health, water and natural resources. Depending on the product's main protection goal, the Blue Angel logo displays four different attributes. As an example, a climate-friendly product can be identified thanks to the inscription "protects the climate".	

[117] http://www.eucertplast.eu

Blue Angel (Blauer Engel)	
Stakeholders	Four German institutions are in charge of the Blue Angel. ▪ The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety is the owner of the Blue Angel; ▪ The Federal Environment Agency develops the technical criteria of the Basic Award Criteria documents. ▪ The Environmental Label Jury is an independent decision-making body composed of representatives from environmental and consumer associations, trade unions, industry, trade, crafts, local authorities, science, media, churches and federal states. The Jury decides on the products and services to be labelled with the Blue Angel logo as well as on the underlying Basic Award Criteria and the respective compliance verification. ▪ RAL gGmbH is responsible for the verification of company applications for the label. This includes legal defence of the Blue Angel in the case of misuse and management of contracts on the use of the label with companies whose products and services have been awarded the label.
Scope	
Targeted products/sectors	The Blue Angel has requirements for more than 120 product groups in categories such as office, renovation and construction, garden, household and living, electronic devices, energy and heating, and mobility. However, for most of the product groups there are no companies registered with the label. Product groups in which a fair number of references are registered are floor coverings (122), printing devices (1357), sanitary paper (275), wallpapers and woodchip wall coverings (162).
Scope of the assessment	The scope of the assessment is the entire product life cycle from design and production to end-of-life management, as relevant to the specific product group. Impacts vary according to product group, including avoiding some substances/resources and production impact limits.
Geographical scope	The Blue Angel scheme has been designed for the German market but it is now international in the sense that non-German companies are applying for the mark and that the mark is visible on products sold outside Germany and outside the EU.
Companies using the scheme	
Examples of companies using the scheme include Bauer, Fujitsu, Dell, Dulux, Danke, HP, Konica Minolta, Rewe, Siemens, Toshiba, Vaillant. About 11,700 products and services in more than 120 product categories carry the Blue Angel ecolabel.	
Link with other schemes, link to ISO standards or other standards	
The Blue Angel makes up an element of the German approach to a "top runner programme" on Products and Environment, alongside minimum efficiency standards (Ecodesign Directive); mandatory energy consumption labelling (EU Energy Label), and environmental criteria for public procurement. The Blue Angel is presented as voluntary environmental labelling of top-runner products (EU ecolabel and Der Blaue Engel).	
Public information	
The application procedure and the list of documents on Basic Award Criteria for companies are available at: http://www.blauer-engel.de/en/company/costs/index.php and http://www.blauer-engel.de/en/company/survey_basic_award_criteria.php A register of all label users (manufacturers and trading companies) is available at: http://www.blauer-engel.de/en/products_brands/search_products/search_for_products.php	
General features of the compliance system	
The compliance system appears to be relevant only to the initial application process. It is not clear whether similar data needs to be provided by the applicant for renewal of the use of the label. Each product group has Basic Award Criteria developed by the German Federal Environment Agency (Umweltbundesamt, UBA) and verified by RAL. These criteria make reference to ISO standards where they exist, to international substance risk classifications, etc. The compliance system is primarily based on contract terms requiring the label bearer to comply with the label's requirements, although in some cases annual reporting is required and can include third-party verification (e.g. emissions from copy paper production).	
References	
▪ Blue Angel official website: http://www.blauer-engel.de ▪ RAL, 2008. Environment brochure. Available at: http://www.ral-umwelt.de/fileadmin/lib/pdf/umwelt/RU_Imagebroschuere_2008.pdf ▪ The Blue Angel, 2011. Company Information The Blue Angel – Stay Ahead of the Competition with The Blue Angel!	

Carbon Trust – Organisational carbon footprint and Value chain carbon footprint

Carbon Trust – Organisational carbon footprint and Value chain carbon footprint		
Brief presentation		
The Carbon Trust manages an organisational footprint certification system called the "Carbon Trust Standard". The Carbon Trust has also developed carbon footprinting software called "Value chain manager" which can be used by companies to measure their corporate carbon footprint. **Official websites:** www.carbontrust.com and www.carbontruststandard.com		
Key features		
Nature of the scheme	▪ Carbon reporting with certification ▪ Accounting tool	The Value Chain Manager software enables organisations to measure their carbon footprint along their value chain. It can be used as an internal tool to reduce emissions and to obtain the Carbon Trust Standard. It can also be used to meet the requirements on the new UK regulation on GHG reporting. The Carbon Trust has also developed a certification system for organisations called the "Carbon Trust Standard" which includes an accounting methodology and verification activities that ensure compliance. The Carbon Trust Standard is a mark of achievement and recognition for organisations measuring, managing, and reducing greenhouse gas emissions.
Thematic area	▪ Environment (GHG emissions)	
Scope of the scheme	☐ Product ☒ Organisation	The "Value Chain Manager" tool developed by The Carbon Trust enables organisations to calculate their carbon footprint. The tool addresses emissions hotspots and suggests actions to reduce the footprint and associated costs. The Carbon Trust also has a global certification programme for organisations carbon footprints: the "Carbon Trust Standard".
Regulatory framework	☒ Voluntary ☐ Mandatory	Although voluntary, the "Carbon Trust Standard" is one of the leading international marks of achievement and recognition in the field of corporate GHG accounting. Carbon Trust's tools and methodologies for corporate GHG accounting may be applied as part of the new UK Mandatory Carbon Reporting regulation (see factsheet on UK Mandatory Carbon Reporting).
Scheme owner	☐ Public ☒ Private	The Carbon Trust is a private entity and the owner of this scheme. This independent not-for-profit group played a key role in informing the UK Government's low carbon innovation strategy. Carbon Trust Certification Limited is a wholly-owned subsidiary of Carbon Trust Enterprises Limited.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	Certification activities are carried out by Carbon Trust Certification Limited or international affiliates of the Carbon Trust.
	Invisible characteristics Yes ☒ No ☐	The "Value chain carbon footprint" accounts for GHG emissions related to an organisation's activities along the entire value chain, i.e. including scope 3 emissions such as emissions from purchased goods and services, business travel and employee commuting.
Context and scheme status		
History and future developments	The Carbon Trust was set up by the UK Government (Department for Environment, Food and Rural Affairs – Defra) in 2001. The Carbon Trust Standard was launched in June 2008 and is currently in use. The Carbon Trust Standard methodology is based on existing international carbon measurement standards and extensive research with businesses, public sector organisations and stakeholders.	

Carbon Trust – Organisational carbon footprint and Value chain carbon footprint	
Stakeholders	The Standard is subject to annual review and takes into account feedback from applicants, certified organisations, our assessors, external stakeholders and others. Carbon Trust Certification Limited has established an international network of Affiliates with leading certification companies and carbon experts. Affiliates can award the Carbon Trust Standard and are subject to the Carbon Trust quality control. Affiliates include CTI International Certification Co. in China, Korea Productivity Centre in South Korea, Vireo SRL in Italy, etc.
Scope	
Targeted products/sectors	Any organisation in any sector. The Carbon Trust Standard rules are segmented based on the energy consumption on first application of the whole or part of the organisation applying for certification.
Scope of the assessment	In the Carbon Trust Standard Rules, distinction is made between level 1 and level 2 emissions. Level 1 includes energy and owned transport emissions. Level 2 includes direct emissions, electricity and business travel. The Value Chain Manager software allows to account for emissions along the entire value chain, including Scope 3 emissions.
Geographical scope	International (scheme initiated in the UK)
Companies using the scheme	
Over 650 organisations have achieved the Carbon Trust Standard since its launching in June 2008. Standard-bearers range from large multinational organisations to small organisations (Marks & Spencer, Lafarge, Fujitsu, etc.).	
Link with other schemes, link to ISO standards or other standards	
The Carbon Trust Standard builds on other existing international standards for the measurement of corporate carbon emissions: the Greenhouse Gas Protocol Corporate Standard and ISO14064-1:2006.	
Public information	
Commercial information on carbon footprint measurement activities (including corporate carbon footprint software) is available at: http://www.carbontrust.com/client-services/footprinting/footprint-measurement Information on the Carbon Trust Standard and related verification activities for corporate footprint is available at: http://www.carbontruststandard.com	
General features of the compliance system	
The Carbon Trust has developed software to quantify the carbon footprint of organisations. Companies can either assess their carbon footprint themselves using this "Value Chain Manager" tool or ask the Carbon Trust to calculate the carbon footprint for them. The Carbon Trust has also developed the Carbon Trust Standard. Assessment against the Standard is undertaken by independent third-party assessors. The assessment process is managed by Carbon Trust Certification Limited. The Standard specifies requirements in three key areas: carbon footprint measurement, carbon management and carbon reduction performance. During the assessment process, an independent assessor will review the carbon footprint data of the applying organisation. The carbon footprint must be measured in accordance with international best practice in carbon accounting. This assessment will include visiting the organisation and verifying the evidence contained in the application. On successful assessment, Carbon Trust Certification Limited will issue a verification letter providing details on the verified footprint. Certification is valid for two years and after that recertification is required. The cost of verification depends on the energy bill of the organisation and the complexity of the footprint. Quotations on verification cost are made by Carbon Trust Certification upon request.	
References	
▪ Carbon Trust, 2010. The Carbon Trust Standard Rules v1.3 June 2010. ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2004. GHG Protocol – A Corporate Accounting and Reporting Standard – Revised edition ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2011. GHG Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard – Supplement to the GHG Protocol Corporate Accounting and Reporting Standard ▪ ISO 14064-1:2006 – Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	

Carbon Trust – Product carbon footprint

Carbon Trust – Product carbon footprint		
Brief presentation		
The Carbon Trust offers carbon-labelling services: the Carbon Reduction Label and the Carbon Label. To use one of these labels for a given product or service, a company needs to have its footprint measurement verified and certified by The Carbon Trust. The Carbon Trust has also developed carbon footprinting software called "Footprint Expert" which can be used by companies to calculate the carbon footprint of their products and services. **Official websites:** www.carbontrust.com and www.carbontrustcertification.com		
Key features		
Nature of the scheme	▪ Quantitative environmental labelling (carbon) ▪ Accounting tool	The "Footprint Expert" tool developed by the Carbon Trust enables companies to measure the carbon footprint of their products and services. The Carbon Trust offers two kinds of carbon labelling options for products: "Carbon Reduction Label" and "Carbon Label". Both labels enable companies to communicate on their products and services carbon footprint measurement, certification and reduction. With the Carbon Reduction Label, there is a commitment to reduce the footprint.
Thematic area	▪ Environment (GHG Emissions)	
Scope of the scheme	☒ Product ☐ Organisation	
Regulatory framework	☒ Voluntary ☐ Mandatory	Although voluntary, Carbon Trust – Product carbon footprint is internationally well known and based on globally recognised standards.
Scheme owner	☐ Public ☒ Private	The owner of this scheme is The Carbon Trust. It is a private entity. This independent not-for-profit group played a key role in informing the UK Government's low carbon innovation strategy. Carbon Trust Certification Limited is a wholly-owned subsidiary of Carbon Trust Enterprises Limited. It derives its income from certification fees.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	Certification activities are carried out by Carbon Trust Certification Limited.
	Invisible characteristics Yes ☒ No ☐	The carbon footprint of a product accounts for GHG emissions generated throughout its life cycle. This includes, for instance, emissions related to energy consumption during production phases. Such energy consumption cannot be measured directly on the product (embedded impact).
Context and scheme status		
History and future developments	The Carbon Trust was set up by the UK Government (Department for Environment, Food and Rural Affairs – Defra) in 2001. The Carbon Reduction Label was launched in 2007 and is currently in use.	
Stakeholders	The Carbon Trust receives funding from the Government, including the Department of Energy and Climate Change, the Scottish Government, the Welsh Government and Invest Northern Ireland. It also derives its income from its consulting and footprinting activities. Carbon Trust Certification Limited is accredited by the United Kingdom Accreditation Service (UKAS) to ISO 14065:2007 to provide greenhouse gas verification against PAS 2050 and the Code of Good Practice for Product Greenhouse Gas Emissions and Reduction Claims.	
Scope		
Targeted products/sectors	Any product or service.	
Scope of the assessment	The Carbon Trust – Product carbon footprint accounts for emissions along the entire life cycle of products including extraction of raw materials, manufacturing, packaging, distribution and retail, use and disposal.	
Geographical scope	International (scheme initiated in the UK)	

Carbon Trust – Product carbon footprint
Companies using the scheme
The software "Footprint Expert" has been used by over 200 organisations in 26 countries. Users of the "Footprint Expert" software include PepsiCo, Coca Cola, Dyson, Tesco, Marks & Spencer, etc. So far, the Carbon Reduction Label has been used by over 90 brands in 19 countries. Carbon Reduction Label holders include: ALDI, Allied Bakeries, Bong AB, Formica, GNP Company, Loomis, PepsiCo, PHS, Straight plc., Suzano, Tesco, The New Zealand Wine Company, Walkers, Tobermore.
Link with other schemes, link to ISO standards or other standards
The carbon footprint tools developed by the Carbon Trust have been designed to comply with the globally recognised product carbon footprinting standards, i.e. PAS 2050:2011 and the GHG Protocol Product standard.
Public information
Commercial information on carbon footprint measurement activities (including carbon footprint software for products) is available at: http://www.carbontrust.com/client-services/footprinting/footprint-measurement Information on the services for product carbon footprint certification is available at: http://www.carbontrustcertification.com
General features of the compliance system
The Carbon Trust developed software to assess the carbon footprint of products along the entire life cycle. Companies can either assess their carbon footprint themselves using the "Footprint Expert" software (a license is required) or ask Carbon Trust to calculate the carbon footprint for them. The Carbon Reduction Label and the Carbon Label are associated with a certification system. In this system, verifications against PAS 2050 and/or the WRI/WBCSD GHG Protocol Product Standard are carried out by Carbon Trust Certification Limited. Label certification also requires conformity with supplementary requirements of the Footprint Expert Guide and of the Code of Good Practice for Product Greenhouse Gas Emissions and Reduction Claims. Use of the Carbon Reduction Label requires re-certification every two years when it must be demonstrated that the carbon footprint of a certified product or service has reduced.
References
▪ The Carbon Trust, 2008. Code of Good Practice for Product Greenhouse Gas Emissions and Reduction Claims – Guidance to support the robust communication of product carbon footprints. ▪ DEFRA, 2011. PAS 2050: 2011: Specification for the assessment of the life cycle greenhouse gas emissions of goods and services. British Standard, BSi, London. ▪ Footprint ExpertTM Guide ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2011. GHG Protocol – Product life cycle accounting and reporting standard.

CE marking

<table>
<tr><th colspan="3">CE marking</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The CE marking is a mandatory conformity marking for certain product groups placed on the European Economic Area (EEA) market. This regulatory mark proves that the product complies with EU legislation on health, safety and environmental protection and enables free movement of the product within the EEA.
To make sure that their products comply with the relevant safety requirements, manufacturers have to evaluate and attest the compliance of their product to the current specific Directives and/or standards. Depending on the product category and its risks, the intervention of a notified body can be required.
Official website: http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Conformity mark</td><td rowspan="2">The CE marking is a mandatory conformity marking for products placed on the market in the European Economic Area. This also applies to products made in other countries that are sold in the EEA.
By affixing the CE marking to a product, the manufacturer states, on his sole responsibility, that the product is assessed before being placed on the market and meets EU safety, health and environmental protection requirements.</td></tr>
<tr><td>Thematic area</td><td>▪ Quality and Safety</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td><td rowspan="2">Not all products must bear the CE marking, only product categories mentioned in specific EU directives.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>The owner of this scheme is the European Union.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td rowspan="2">The compliance system varies according the products categories. For some products, such as measuring instruments, only measurable characteristics are verified through tests. For others, such as toys, the quality system is audited.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">This scheme was implemented in 1993 and is currently in use.
The CE marking scheme was created in the frame of the regulation for technical harmonisation in Europe (the "European single market"). CE currently means "European Conformity" (Conformité Européenne) but originally meant "European Community" (Communauté Européenne). Under this legislation, manufacturers must make an explicit declaration that their products are safe. This declaration includes affixing the CE marking on the product.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The label is owned by the European Commission.
Member States shall ensure the correct implementation of the regime governing the CE marking.
An authorised third party (notified bodies) is responsible for audit when it is needed. These Bodies are accredited by national authorities and officially "notified" to the Commission and listed in the NANDO (New Approach Notified and Designated Organisations) database.
Laboratories chosen by the manufacturer (which can also be the notified body) are responsible for the testing.</td></tr>
</table>

CE marking	
Scope	
Targeted products/sectors	Products concerned by the CE marking are those that fall into product categories subject to specific directives that provide for CE marking. It includes the following categories: active implantable medical devices, appliances burning gaseous fuels, cableway installations designed to carry persons, eco-design of energy related products, electromagnetic compatibility, equipment and protective systems intended for use potentially explosive atmospheres, explosives for civil uses, hot-water boilers, in vitro diagnostic medical devices, lifts, low voltage devices, machinery, measuring instruments, medical devices, noise emission in the environment, non-automatic weighing instruments, personal protective equipment, pressure equipment, pyrotechnics, radio and telecommunications terminal equipment, recreational craft, safety of toys and simple pressure vessels.
Scope of the assessment	Even if all stakeholders of the supply chain must ensure that the product complies with the ad hoc Directive, only the product manufacturing (design and production) is assessed.
Geographical scope	European Economic Area (EEA): The 27 Member States of the EU and European Free Trade Association (EFTA) countries Iceland, Norway, Liechtenstein
Companies using the scheme	
Every company that wants to sell its products in the EEA market.	
Link with other schemes, link to ISO standards or other standards	
There are links with all the European directives applying to the product.	
Public information	
The information needed to go through the process of affixing CE marking on a product is publicly available on the EC DG Enterprise and Industry website: http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/professionals/manufacturers/index_en.htm	
General features of the compliance system	
The manufacturer must ensure that its products comply with the essential requirements of the applicable EU Directives. To fulfil the essential requirements, the manufacturer can use the "harmonised standards" cited in the Official Journal[118]. Full compliance of a product to the harmonised standards gives a product the "presumption of conformity" with the relevant essential requirements. The manufacturer also has to test its products to check their conformity. Depending on the products' category, a notified body can be required to verify the conformity. If the product is in compliance with the requirements, the manufacturer writes a Declaration of Conformity. The manufacturer also has to establish the technical documentation required by the directive(s) for the assessment of the product's conformity to the relevant requirements and for the risk assessment. Together with the EC declaration of conformity, technical documentation must be presented by the manufacturer, the distributors or the importer on request to the appropriate national authorities. Once the products are declared compliant, the CE marking must be affixed by the manufacturer according to its legal format visibly, legibly and indelibly to the product or its data plate. If a Notified Body was involved in the production control phase, its identification number must also be displayed.	
References	
▪ CE marking official website: http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/ ▪ European Commission, 2013 NANDO database. Available at: http://ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=notifiedbody.main ▪ Directives related to each products category: http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/professionals/manufacturers/directives/index_en.htm ▪ European Commission, 2000, Guide to the implementation of directives based on the New Approach and the Global Approach. Available at: http://europa.eu.int/comm/enterprise/newapproach/newapproach.htm	

[118] Harmonised standards are available on the "new approach web site": http://www.newapproach.org

EU Organic farming label

EU Organic farming label		
Brief presentation		
The organic farming label is a European scheme that guarantees that agriculture production complies with organic farming standards. Each MS implements its own compliance system including documentary checks and in-farm inspections. **Official website:** http://ec.europa.eu/agriculture/organic/home_en		
Key features		
Nature of the scheme	▪ Seal of approval	The organic product label indicates that at least 95% of the agricultural ingredients of food products are organic. It guarantees the respect of the rules on organic farming (e.g. very strict limits chemical pesticides and fertilisers, no use of GMOs, crop rotation, free-range and open-air livestock raising, etc.)
Thematic area	▪ Environment (Organic farming)	
Scope of the scheme	☒ Product ☐ Organisation	The label is available on the products' packaging. Nonetheless, the verification covers the farmers practices and for importers and processor, the chain of custody.
Regulatory framework	☒ Voluntary ☐ Mandatory	This initiative is voluntary.
Scheme owner	☒ Public ☐ Private	The organic farming label is an initiative from the European Commission
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	The EU Regulations related to organic farming requires that each Member States implement a compliance system.
	Invisible characteristics Yes ☒ No ☐	The organic farming label is mostly based on the verification of embedded impacts. Indeed, the quantity of inputs used to produce the product (fertilizers, pesticides, etc.) cannot be directly measure on it. Nonetheless, if the quantity of pesticides used cannot be measured, the residues can be.
Context and scheme status		
History and future developments	The rules for organic production were established in 1991 with the EU Regulation No 2092/1991, which was derived from the guidelines of the International Federation of Organic Agriculture Movements (IFOAM). In 1999, the Regulation No 1804/1999 regulated the raising, labelling and inspection of cattle. These regulations were reformed between 2007 and 2008 with the Regulation No 834/2007 of the Council on organic agriculture and its implementing regulations, i.e. Commission Regulations No 889/2008 and 1235/2008. In 2010, a new logo was introduced. A review of the European policy on organic agriculture through public consultation is currently taking place By 2013, a full list of control bodies and control authorities in foreign countries, which apply the same rules as for organic farmers and producers in EU should be available, in order to facilitate imports of organic food.	
Stakeholders	Each EU MS must implement a compliance system and designate one or more competent authorities that can delegate the inspection to control bodies. Appropriate bodies accredit the control bodies. Farmers, processors and importers in the organic farming supply chain are inspected.	
Scope		
Targeted products/sectors	Crop cultivation, fruit and vegetables production and cattle breeding	
Scope of the assessment	The certification concerned the producer, but also the processor and the importer.	
Geographical scope	Europe and third countries (Argentina, Australia, Costa Rica, India, Israel, New Zealand, Switzerland and Tunisia) that have national organic production rules and control systems equivalent to those within the EU for certain products. Organic products sold in third countries may bear the EU Organic farming label. This is optional for operators. In cases where the logo is used, the EU legal provisions must be respected.	

EU Organic farming label
Companies using the scheme
197,000 registered organic operators in Europe in 2008 (not necessarily with EU Ecolabel), representing 1.4% of the total number of farms and 4.3% of the total agricultural area.
Link with other schemes, link to ISO standards or other standards
The regulation regarding organic farming is in line with the food law (Regulation 178/2002/EC) which applies to both organic and non-organic food regarding food safety. Official food and feed control are dealt with in the Regulation 882/2004/EC. The EU organic farming system is also linked to the organic production rules and control systems of third country that are equivalent to the EU system.
Public information
The criteria for organic certification are publicly available at: The legislation documentation on organic farming is available at: http://ec.europa.eu/agriculture/organic/eu-policy/legislation_en In particular, the general regulation is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:189:0001:0023:EN:PDF
General features of the compliance system
The respect of the rules on organic farming is ensured through: ▪ **1. Request for certification –** After a two-year period of conversion from conventional to organic farming, the producer can ask for the certification by contacting the competent authorities and a control body ▪ **2. Commitment –** The operator fulfils and signs a commitment form that provides information on its activities. ▪ **3. Evaluation –** The control body performs a documentation review based on the commitment form and an on-site inspection. Testing on samples is optional, except on case of suspicion when it becomes mandatory. The certification body draws up an inspection report and a list of non-compliance that the operator has to address. Then the label is awarded. Every year, the operator is inspected in order to renew the label. Additional inspections and "on the spot" visits may also be carried out by inspectors for operators presenting more risks.
References
▪ EU Organic Farming Label website: http://ec.europa.eu/agriculture/organic/home_en ▪ Regulation (EC) n° 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:031:0001:0024:EN:PDF ▪ Regulation (EC) n° 882/2004 of the European Parliament and of the Council of 24 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:165:0001:0141:EN:PDF ▪ European Commission, 2013, Consultation for the review of European policy on organic farming. Available at: http://ec.europa.eu/agriculture/consultations/organic/2013_en.htm ▪ European Commission, 2011, Working document of the Commission services on official controls in the organic sector. Available at: http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/control_guidelines_version_08072011_en.pdf ▪ European Commission, 2010, An analysis of the EU organic sector. Available at: http://ec.europa.eu/agriculture/markets-and-prices/more-reports/pdf/organic_2010_en.pdf

EU Timber Regulation – Regulation (EU) No 995/2010 (EUTR)

<table>
<tr><th colspan="3">EU Timber Regulation – Regulation (EU) No 995/2010 (EUTR)</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The European Timber Regulation (EUTR) aims at preventing the placing on the EU market of illegally harvested timber and products derived from such timber. It requires EU traders of timber/timber products to keep records of their suppliers and customers as well as to exercise "due diligence". Compliance is verified at the national level by competent authorities.
Official websites:
http://ec.europa.eu/environment/forests/timber_regulation.htm and http://ec.europa.eu/environment/eutr2013/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Due diligence</td><td rowspan="2">The regulation requires traders of timber or products made with timber to verify the origin of the timber they trade in order to make sure it is not illegally harvested.</td></tr>
<tr><td>Thematic area</td><td>▪ Sustainable resource use (wood)</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td><td>The Regulation covers a broad range of timber products including solid wood products, flooring, plywood, pulp and paper.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td><td>The Regulation is legally binding on all 27 EU Member States, which are responsible for laying down effective, proportionate and dissuasive penalties and for enforcing the Regulation.</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>EUTR is a policy from the European Commission.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>In each Member State, a competent authority coordinates the application of the Regulation, carries out checks on timber and timber-product traders as well as on monitoring organisations, and establishes penalties.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>This initiative verifies invisible characteristics since the illegal origin of timber or timber-products cannot be measured or tested on the product itself.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">In 2010, the EU adopted this new timber regulation (No 995/2010). The regulation entered into force on March 3rd 2013 to allow involved stakeholders to have enough time to prepare for the regulation requirements. A consultation process was held on secondary regulation, i.e. the Regulation establishing the procedural rules for the recognition and withdrawal of recognition of Monitoring Organisations (published in 2012).</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The list of competent authorities is available at:
http://ec.europa.eu/environment/forests/pdf/list_competent_authorities.pdf</td></tr>
<tr><td colspan="3">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="2">The EUTR applies to both timber that is harvested in the EU and to imports of timber and timber products from third countries. The regulation covers almost all timber products. These products are defined using the international customs nomenclature and are listed in the Annex to the regulation. The Regulation covers a broad range of timber products including solid wood products, flooring, plywood, pulp and paper. Recycled products, printed paper (e.g. books, magazines, newspapers) and timber products that have completed their life cycle (waste wood and waste paper) are not included. The product scope can be amended if necessary.</td></tr>
<tr><td>Scope of the assessment</td><td colspan="2">Timber harvesting</td></tr>
<tr><td>Geographical scope</td><td colspan="2">EU</td></tr>
<tr><td colspan="3">Companies using the scheme</td></tr>
<tr><td colspan="3">All the EU timber or timber product traders use this scheme since it is a mandatory scheme.</td></tr>
</table>

EU Timber Regulation – Regulation (EU) No 995/2010 (EUTR)
Link with other schemes, link to ISO standards or other standards
Timber and timber products covered by valid FLEGT (Forest Law Enforcement, Governance and Trade) or CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) licenses are considered to be in compliance with the requirements of the Regulation. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan aims to exclude illegal timber from markets to improve the supply of legal timber and to increase the demand for responsible wood products. The FLEGT Voluntary Partnership Agreements (VPAs) ensure that only legally harvested timber is imported into the EU, from countries agreeing to take part in this scheme. The current EUTR regulation does not allow for official recognition of private certification schemes as compliant with the Regulation, therefore FSC certification, for instance, is not officially recognised as complying with the current Regulation. However, FSC certification can play a major role in establishing a negligible risk of illegal timber in the supply chain and is an important consideration in risk assessment and mitigation.
Public information
Documents on the preparatory work are available at: http://ec.europa.eu/environment/forests/timber_regulation.htm The text of the regulation can be found at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:295:0023:0034:EN:PDF
General features of the compliance system
The timber regulation requires timber and timber product traders to exercise "due diligence". This latter requirement implies carrying out a risk management exercise to minimise the risk of placing illegally harvested timber or products containing such timber on the EU market through: ▪ Information collection (the operator must have access to information describing the timber and timber products, the country of harvest, species, quantity, details of the supplier and information on compliance with national legislation); ▪ Risk assessment (the operator should assess the risk of illegal timber in his supply chain based on the information identified above and taking into account criteria set out in the regulation); ▪ Risk mitigation (when the assessment shows that there is a risk of illegal timber in the supply chain, the risk can be mitigated by requiring additional information and verification from the supplier). The Regulation establishes that Monitoring Organisations, i.e. private entities that provide EU operators with operational due diligence system, need to be recognised by the EU Commission. Operators can choose to use a diligence system developed by recognised Monitoring Organisations or to develop their own. In each country, a competent authority coordinates the application of the Regulation, carries out checks on timber and timber-product traders as well as periodic monitoring for compliance of the organisations, and establishes penalties. Penalties for non-compliance are established at the MS level. The competent authorities should carry out checks (without prior warning) at least every two years, including spot checks, and including: field audits; examination of documentation and records of monitoring organisations; interviews with the management and staff of the monitoring organisation; interviews with operators and traders or any other relevant person; examination of documentation and records of operators; examination of samples of the supply of operators using the due diligence system of the monitoring organisation concerned.
References
▪ Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market ▪ European Commission. Guidance document for the EU timber regulation ▪ European Commission, 2010. EUTR leaflet – EU Timber Regulation applicable from 3 March 2013 ▪ Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973. Revised in 1979 and 1983 ▪ FLEGT's website: http://www.euflegt.efi.int/portal/

European Social Label

<table>
<tr><th colspan="3">European Social Label</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The European Social Label assesses the social environment within a company based on the perception of the employees. Employees fill in a secure online questionnaire. Answers are then analysed by the European Social Label (ESL) institute to obtain a global score. No detailed information on the criteria and the scoring system is publicly available. The label is valid for two years. The label is only based on employee perceptions. There is no verification of the employees' answers.
Official website: http://www.europeansociallabel.org/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Seal of approval</td><td rowspan="3">The European Social Label objective is to identify the best performing companies and to promote the best practices in terms of social climate through an independent label.
The European Social Label Institute gives a global score to a company based on an employee survey. Depending on the score, the label is awarded or not.</td></tr>
<tr><td>Thematic area</td><td>▪ Social (social climate)</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td>The European Social Label is a chargeable service proposed by the European Label Institute.</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td><td>The owner of this scheme is the European Social Label Institute. It is a non-profit organization created by a group of entrepreneurs.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☐ No ☒</td><td>Although some provisions regarding how the label is awarded are mentioned on the ESL website, it can be considered that there is no fully developed compliance system.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>The label is awarded based on employee perceptions of the social environment within the company. The social environment cannot be easily evaluated through audits and inspections. It can be considered as an invisible impact.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">This scheme was initiated by the European Social Label Institute. It was launched recently, in 2011. This label has been created to favour social dialogue within organisations.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The European Social Label Institute is an association composed of an advisory council and a scientific and ethic council.</td></tr>
<tr><td colspan="3">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="2">Any company in any sector</td></tr>
<tr><td>Scope of the assessment</td><td colspan="2">The assessment focuses on the company and its management. The other actors of the value chain (suppliers, clients) are not in the scope of the assessment.</td></tr>
<tr><td>Geographical scope</td><td colspan="2">Europe</td></tr>
<tr><td colspan="3">Companies using the scheme</td></tr>
<tr><td colspan="3">Three companies use this scheme: Netizencall, Teletech International and Ingedec.</td></tr>
<tr><td colspan="3">Link with other schemes, link to ISO standards or other standards</td></tr>
<tr><td colspan="3">There is no link with other schemes or standards.</td></tr>
<tr><td colspan="3">Public information</td></tr>
<tr><td colspan="3">The description of the voting system and the main criteria are available at: http://www.europeansociallabel.org/referentiel-label-social.html and http://www.europeansociallabel.org/vote-label-social.html.
Detailed information about the criteria and scoring system is not available.</td></tr>
</table>

European Social Label
General features of the compliance system
The employees fill in a secure online questionnaire. Then, the answers are analysed by ESL institute and an average score is calculated. The label is awarded if: ▪ At least 50% of the employees with more than 3 months of seniority have answered the questionnaire ▪ The global score is higher than a threshold defined by the scientific and ethic council ▪ No sub-scores for thematic areas is under 2/20. The label is valid for two years. The standard is only based on employees' perception. There is no verification of the employees' answers.
References
▪ European Social Label website: http://www.europeansociallabel.org

Forest Stewardship Council (FSC)

Forest Stewardship Council (FSC)		
Brief presentation		
Forest Stewardship Council (FSC) certification ensures that products come from well-managed forests that provide environmental, social and economic benefits. There are two main types of certification: forest management certification and chain of custody certification[119], which relate respectively to production and subsequent progress of forest products through the value chain. The scheme has a democratically balanced organisation. Chain of Custody standards were developed ten years after the FSC was created, to address the reality of a complex production chain. **Official website:** https://ic.fsc.org/		
Key features		
Nature of the scheme	▪ Seal of approval	The FSC label gives a guarantee to consumers that products come from well-managed forests. The label relies on standards and on a certification system to ensure sustainable forestry management and traceability of FSC-certified wood and products along the supply-chain.
Thematic area	▪ Sustainable resource use (wood)	
Scope of the scheme	☒ Product ☐ Organisation	This scheme is a product-oriented scheme because in the end, the objective is to affix the FSC trademark on a product.
Regulatory framework	☒ Voluntary ☐ Mandatory	The FSC scheme is voluntary. Nonetheless, FSC criteria can be incorporated into service contracts such as in green products procurement.
Scheme owner	☐ Public ☒ Private	The owner of this scheme is FSC International. It is a non-governmental organisation. FSC is an international membership association governed by its members, which may be organisational – representing their institution or organisation – or individual. Members include representatives of environmental and social NGOs, the timber trade, forestry organisations, indigenous people's organisations, community forestry groups, retailers and manufacturers, forest certification organisations, as well as individual forest owners and interested parties. Members apply to join one of three chambers – environmental, social and economic – that are further sub-divided into northern and southern sub-chambers. Each chamber holds 1/3 of the weight in votes. This guarantees that influence is shared equitably between different interest groups and levels of economic power.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	FSC certificates are awarded by independent certification bodies, which are accredited by the ASI (Accreditation Services International).
	Invisible characteristics Yes ☒ No ☐	Invisible characteristics of FSC products relate to sustainable forest management e.g. maintaining or enhancing long-term economic, social, and environmental benefits from the forest, such as maintaining the ecosystems or protecting indigenous peoples' rights.
Context and scheme status		
History and future developments	This scheme is currently in use and was initiated by NGOs and companies. Following intensive consultations in ten countries to build support for the idea of a worldwide certification system, the FSC Founding Assembly was held in Toronto, Canada in 1993. The FSC Secretariat opened in Oaxaca, Mexico and the FSC was established as a legal entity in Mexico in February 1994. Although FSC exists since 1994, its Chain of Custody (CoC) standard was developed later in response to the need to ensure compliance along a supply chain. The first CoC standard was endorsed by the FSC Board of Directors in September 2004.	

[119] A third type of certification is "controlled wood" which is designed to allow organisations to avoid the categories of wood considered unacceptable by FSC. FSC Controlled Wood can only be mixed with FSC certified wood in labelled FSC Mix products.

Forest Stewardship Council (FSC)	
Stakeholders	FSC was founded by a group of NGOs and companies including Greenpeace, WWF and the UK DIY retailer B&Q. FSC does not issue certificates itself. Accreditation Services International (ASI), an independent organisation created by FSC, manages the accreditation of independent certification bodies. Certification bodies carry out forest management and chain of custody assessments that lead to FSC certification. ASI also offers accreditation services for the Aquaculture Stewardship Programme, MSC and RSPO.
Scope	
Targeted products/sectors	Wood products, pulp and paper products, non-timber forest products (e.g. cork, natural gum and resin, etc.)
Scope of the assessment	**Forest Management** FSC Forest Management certification confirms that a specific area of forest is being managed in line with the FSC Principles & Criteria. **Chain of Custody** This standard defines and addresses the basic elements of a chain of custody management system: quality management (responsibilities, procedures and records), product scope (definition of product groups and outsourcing arrangements), material sourcing (material specifications including requirements for materials generated on-site), material receipt and storage (identification and segregation), production control (control of quantities and determination of FSC claims), sales & delivery (invoicing and transport documentation) and labelling (application of FSC labels on-product and labelling thresholds).
Geographical scope	International
Companies using the scheme	
About 180.000 million ha are certified which corresponds to about 1,200 Forestry Management certificates awarded. Examples of companies awarded with a forestry management certificate include UPM–Kymmene Oyj, SIG COMBIBLOC, Kimberly-Clark Corporation, Kruger Products, UK's Royal Mail, Trenitalia, John Lewis. About 25,500 Chain of Custody certificates have been awarded in 112 countries. Certificates are not necessarily awarded to companies as projects can also be certified. No name of Chain of Custody certified company has been found on the FSC official website.	
Link with other schemes, link to ISO standards or other standards	
In general, FSC Principles and Criteria (P&C) set out best practice for forest management. In many countries, FSC Regional or National Standards are developed by FSC working groups. Regional and national standards transfer the P&C to the specific conditions and context of the country or region under consideration. FSC is a member of the ISEAL Alliance (International sustainability standards organisation) which develops guidance and facilitates coordinated efforts to scale up its members' social and environmental impacts.	
Public information	
All FSC international and national standards are available at: https://ic.fsc.org/standards.340.htm and https://ic.fsc.org/national-standards.247.htm The list of accredited certification bodies is available at: http://www.accreditation-services.com/archives/certification_bodies The FSC has a public database of FSC Certificate holders that can be accessed at: http://info.fsc.org/	

Forest Stewardship Council (FSC)
General features of the compliance system
There are 5 steps towards certification: ▪ 1. One or several FSC accredited certification bodies is/are contacted by the applicant, providing basic information about the operation (also helping to give an estimate of the cost and time for certification of the operation). The certification body provides information about the requirements for FSC certification. ▪ 2. The organisation selects which certification body it wants to work with and signs an agreement with that certification body. ▪ 3. The certification audit takes place to assess the company's qualifications for certification. ▪ 4. The data collected at the audit is the basis of the audit report on which the certification body makes its decision. ▪ 5. If the certification decision is positive, the operation receives an FSC certificate. If the audit revealed that the operation is not in full compliance with the FSC requirements yet, then further audits can be conducted after the changes suggested in the certification report have been implemented. FSC certificates are valid for five years and the FSC accredited certification body conducts annual surveillance audits to verify continued compliance with FSC certification requirements.
References
▪ FSC international website: https://ic.fsc.org/ ▪ Forest Stewardship Council A.C., 1996. FSC International Standard – FSC principles and criteria for forest stewardship – FSC-STD-01-001 (version 4-0) ▪ Forest Stewardship Council A.C., 2011. FSC STANDARD ADDENDUM – FSC Product Classification – FSC-STD-40-004a V2-0 ▪ Forest Stewardship Council A.C., 2013. Global FSC certificates: type and distribution – June 2013

French mandatory framework for corporate GHG reporting (Grenelle II law – Art. 75)

<table>
<tr><th colspan="3">French mandatory framework for corporate GHG reporting (Grenelle II law – Art. 75)</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">Under Article 75 of the Grenelle II Law (and its application decree n°2011-829), private entities employing more than 500 persons in metropolitan France must report their greenhouse gas emissions. The reporting must be made public and must be updated every three years. There is no mandatory third-party validation. To date, French authorities have not established a clear framework for verification activities related to this mandatory reporting.
Official website: http://www.developpement-durable.gouv.fr/Bilans-des-emissions-de-gaz-a.html</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Carbon reporting</td><td rowspan="2">The GHG emissions assessment aims to identify and rank the emissions sources in order to implement reduction actions. GHG reporting and action plan, as well as their future updates, are made public on the company's website.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment (GHG emissions)</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td><td rowspan="2">The mandatory reporting applies to companies that employ more than 500 persons in metropolitan France or 250 persons in the overseas departments and regions. The assessment must cover the activities occurring on French territory.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>This scheme is a French Government policy. Communication on the scheme is performed by the French Ministry of Environment (MEDDE).</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☐ No ☒</td><td>Although some provisions regarding the follow-up of the carbon emissions declared to public authorities are mentioned in the application decree n°2011-829, it can be considered that there is no fully developed compliance system.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>Reporting is required for some indirect impacts e.g. indirect emissions from purchased energy.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">In the early 2000s, the ADEME (the French Environment Agency) developed and tested the Bilan Carbone®, a comprehensive methodology of voluntary application for organisations willing to estimate their GHG emissions and to set up an emission reduction plan. The transition to a mandatory system was achieved through the "Grenelle de l'Environnement" which took place in 2007. It led to the development of a legislative framework for carbon reporting.
The application decree of Article 75 of the Grenelle Law II detailing the practical modalities of the GHG mandatory reporting was published in July 2011. The decree also provides a new institutional framework around a national coordination committee established in order to develop the methodologies needed in support of GHG emissions inventories and to define the official emission factors.
The major outcomes of the national coordination committee's work are a new methodology named Bilan d'Emission de Gaz à Effet de Serre (BEGES) and the definition of the official emission factors to be used with this methodology.
The application of this scheme is still recent. Indeed, the first mandatory GHG reports for year 2011 (or 2010) had to be transmitted by December 31st, 2012 to the Prefect of the French Region in which the headquarters of the reporting company is located.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The BEGES methodology was developed jointly by representatives of stakeholders such as companies and the French administration. It was approved and published by the Minister of Environment.
In order to support the mandatory GHG reporting, ADEME implemented the "Base Carbone®" which is a national public database containing sets of emissions factors and other statistical data.</td></tr>
</table>

French mandatory framework for corporate GHG reporting (Grenelle II law – Art. 75)	
Scope	
Targeted products/sectors	The mandatory reporting applies to "legal person governed by private law" (i.e. companies) that employ more than 500 persons in metropolitan France or 250 persons in the overseas departments and regions, in any sector. A company is identified by its French SIREN number. If a firm is structured into several establishments (each identified by a SIRET number), they are part of the company boundary for this GES reporting. Companies affected by this obligation are those that have their headquarters or stable establishments on the French territory, and exceed previously mentioned headcount threshold.
Scope of the assessment	The assessment must cover the activities occurring on the French territory. The law requires reporting on type 1 and 2 emissions (i.e. direct emissions and indirect energy emissions).
Geographical scope	France
Companies using the scheme	
Based on a survey of a sample of organisations, it was reported in march 2013 that less than 50% of the companies subject to the regulation had published their reporting. Examples of companies using this scheme include Bouygues Telecom, Novartis, SNCM, Fedex, Nielsen.	
Link with other schemes, link to ISO standards or other standards	
The BEGES methodology builds on the principles of ISO 14064-117. It has also been developed consistently with other existing national and international schemes such as Bilan Carbone® and GHG Protocol.	
Public information	
The reporting methodology and practical details are provided on the website of the French ministry of Environment: http://www.developpement-durable.gouv.fr/Bilans-des-emissions-de-gaz-a.html Emissions factors that can be used for carbon accounting can be accessed for free through the Base Carbone®: http://www.basecarbone.fr/	
General features of the compliance system	
The GHG emissions assessment can be carried out internally and there is no mandatory third-party validation. Only the reporting format is to be respected. In case of non-compliance with the regulatory provisions, no penalty is provided. The prefect just has to remind the obligation to the company. Regarding potential verification activities initiated by public authorities, the application decree n°2011-829 states that in each French region, the Prefect and the President of the Regional Council will perform a follow-up of the GHG reports in their regions. The modalities of this follow-up are not detailed and must be defined jointly by the Prefect and the President of the Regional Council. Follow-up activities include inventorying the published GHG emissions reports as well as verifying the compliance of the reports with the law. Companies can be asked to modify their report if needed. At least every three years, the Prefect and the President of the Regional Council must deliver a report - presenting the number of GHG assessments, their quality and the methodological difficulties encountered - to national authorities. In addition, the Prefect of Region has to remind all affected companies their reporting obligations. In some regions, official mails were sent in 2012 by the prefecture to identified companies in order to remind them that they must provide a report by the end of the year.	
References	
▪ MEDDTL. (2012). Méthode pour la réalisation des bilans d'émissions de Gaz à effet de serre conformément à l'article 75 de la loi n°2010-788 du 12 juillet 2010 portant engagement national pour l'environnement (ENE). Available at: http://www.developpement-durable.gouv.fr/Bilans-des-emissions-de-gaz-a.html This document is only available in French. ▪ LOI n° 2010-788 du 12 juillet 2010 portant engagement national pour l'environnement. Official text available at: http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000022470434#LEGIARTI000022472948 ▪ Décret n° 2011-829 du 11 juillet 2011 relatif au bilan des émissions de gaz à effet de serre et au plan climat-énergie territorial. Official text available at: http://legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000024353784&categorieLien=id ▪ ISO 14064-1:2006 – Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2004. GHG Protocol – A Corporate Accounting and Reporting Standard – Revised edition	

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards		
Brief presentation		
The World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) developed a number of different accounting products and tools including corporate accounting, project-based accounting (for emissions reduction projects), product accounting, and supply chain accounting approaches. Compliance with the standards is a function of internal management systems, and the way companies or organisations choose to undertake verification. The Standards can be used for mandatory reporting, as in the case of the European Union Emissions Trading System (EU ETS), the Integrated Pollution Prevention and Control (IPPC) Directive and the European Pollutant Emission Registry (EPER). The Corporate Standard sets out how to undertake a GHG inventory for any given organisation (whether corporate or other such as a public authority). The Scope 3 Standard extends beyond any given organisation, to the whole of its supply chain. The Scope 3 Standard complements and builds upon the Corporate Standard to promote additional completeness and consistency in the way companies account for and report on indirect emissions from value chain activities. The Corporate Standard classifies a company's direct and indirect GHG emissions into three "scopes," and requires that companies account for and report all scope 1 emissions (i.e., direct emissions from owned or controlled sources) and all scope 2 emissions (i.e., indirect emissions from the generation of purchased energy consumed by the reporting company). The Corporate Standard gives companies flexibility in whether and how to account for scope 3 emissions (i.e., all other indirect emissions that occur in a company's value chain). **Official website:** http://www.ghgprotocol.org		
Key features		
Nature of the scheme	▪ Accounting methodology	This standard is intended for use in internal accounting and possible external reporting for the Corporate Standard. The Scope 3 Standard is for value chain information (beyond an individual corporation, but linked to one), similarly for internal accounting and external reporting.
Thematic area	▪ Environment (GHG emissions)	
Scope of the scheme	☐ Product ☒ Organisation	The Corporate GHG emissions inventory includes indirect emissions resulting from value chain activities (i.e. Scope 3 emissions).
Regulatory framework	☒ Voluntary ☐ Mandatory	The GHG Protocol Standards can be used where mandatory reporting is required, e.g. the IPPC or EPER Directives.
Scheme owner	☐ Public ☒ Private	The owners of this scheme are the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), i.e. NGOs. The WRI is a centre for policy research and analysis regarding global resource and environmental issues. The WBCSD is a coalition of 200 international companies.
Compliance system	**Existence of a compliance system** Yes ☐ No ☒	There is no built-in compliance system. However, guidance and requirements on verification activities are provided.
	Invisible characteristics Yes ☒ No ☐	The "value chain carbon footprint" accounts for GHG emissions related to an organisation's activities along the entire value chain, i.e. including scope 3 emissions such as emissions from purchased goods and services, business travel and employee commuting.

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	
Context and scheme status	
History and future developments	This scheme was initiated by WRI and WBCSD. It was implemented in 2001 and is currently in use. In 1998, WRI and WBCSD launched an NGO-business partnership to create a standardised method for GHG accounting. "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" was published in 2001 and revised in 2004. ISO used it in 2006 as the basis for the 14064 series. WRI and WBCSD continue to work with governments, NGOs and industry associations to promote robust carbon accounting standards. The Scope 3 Standard complements and builds upon the Corporate Standard to promote additional completeness and consistency in the way companies account for and report on indirect emissions from value chain activities. In 2008, WRI and WBCSD launched a three-year process to develop the GHG Protocol Scope 3 Standard. The first draft of the standard was developed in 2009, "road-tested" in 2010 and published in 2011. The standard will continue to form the methodological basis of sectoral accounting approaches. Organisations choosing to develop new methodologies to account for GHG emissions using the GHG Protocol trademark must apply to the GHG Protocol Secretariat.
Stakeholders	A large number of partners provide support in publications and country programmes. For example, the Corporate Standard had support from (amongst others): BP, Environment Canada, Ford Motor Company, Holcim, KPMG, PricewaterhouseCoopers, Shell Global Solutions International B.V., the U.S. Environmental Protection Agency, UNFCCC, and WWF. A similarly shaped list of funders (private companies, public institutions) helps to fund the programme.
Scope	
Targeted products/sectors	Different organisations and businesses have adapted this standard to meet their carbon accounting needs.
Scope of the assessment	The Corporate Standard sets out how to undertake a GHG inventory for any given organisation (whether corporate or not). The Scope 3 Standard extends beyond the organisation. It includes the supply chain. The Scope 3 Standard complements and builds upon the Corporate Standard to promote additional completeness and consistency in the way companies account for and report on indirect emissions from value chain activities. The Corporate Standard classifies a company's direct and indirect GHG emissions into three "scopes" and requires that companies account for and report all Scope 1 emissions (i.e. direct emissions from owned or controlled sources) and all Scope 2 emissions (i.e. indirect emissions from the generation of purchased energy consumed by the reporting company). The Corporate Standard gives companies flexibility in whether and how to account for Scope 3 emissions (i.e. all other indirect emissions that occur in a company's value chain).
Geographical scope	International
Companies using the scheme	
The number of companies using the scheme has not been communicated. Corporate users according to industry sectors include Daimler Chrysler, Ford Motor Company, General Motors, Volkswagen (automobile manufacturers), Heidelberger Cement, Holcim, Italcementi, Lafarge, RMC (cement companies), Body Shop, Cargill, Dell Corporation, Eastman Kodak, IBM, IKEA, Nike, Pfizer Inc., Sony Electronics, Sun Microsystems, Timberland (consumer goods), Birka Energi, ENDESA, N.V. Nuon Renewable Energy (energy services), BP, Norsk Hydro, Shell Canada (oil and gas), ABB Group, Anglo American, BASF, Bayer, BHP Billiton, DuPont Inc., Imperial Chemical Industries, Interface Inc., International Paper, Rio Tinto, StoraEnso, Tata Steel (industrial manufacturing/mining), 500 PPM GmbH, AstraZeneca, DHL, EBRD, PE Europe, UPS (services).	
Link with other schemes, link to ISO standards or other standards	
The International Organisation for Standardization (ISO) adopted the Corporate Standard as the basis for its 14064-I (Specification with Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and Removals).	
Public information	
Information is easily accessible and inclusive. For Corporate Standard, see http://www.ghgprotocol.org/standards/corporate-standard. For Scope 3 Standard, see http://www.ghgprotocol.org/standards/scope-3-standard.	

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards
General features of the compliance system
The GHG Protocol standards are not certification tools. The Protocol only focuses on accounting and reporting of GHG emissions. Both the "Corporate Accounting and Reporting Standard" and the "Corporate Value Chain Accounting and Reporting Standard" set out requirements on how to develop a company's inventory in order to make it more amenable to verification, as well as guidance on verification (called "assurance" in both Standards). The Standards specify the need for verification and suggest that this is best delivered by a third-party (due to independence from the organisation being verified). The Protocol is meant to improve the reliability of collected and reported data. Standard GHG inventory data is required to assess compliance with the internal environmental management system (in this case a GHG management system), the nature of which will vary according to the organisation under consideration and its supply chain.
References
▪ GHG Protocol official website: http://www.ghgprotocol.org ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2004. GHG Protocol – A Corporate Accounting and Reporting Standard – Revised edition ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2011. GHG Protocol – Corporate Value Chain (Scope 3) Accounting and Reporting Standard – Supplement to the GHG Protocol Corporate Accounting and Reporting Standard ▪ ISO 14 064-1:2006– Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals

GHG Protocol – Product Life Cycle Accounting and Reporting Standard

<table>
<tr><th colspan="3">GHG Protocol – Product Life Cycle Accounting and Reporting Standard</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) developed the product accounting standard as part of a range of standards. Compliance with the standards is a function of the internal management systems and the way in which companies or organisations choose to undertake verification. There is no in-built compliance system within the Protocol programme itself, but verification (referred to as "assurance" in the Standard document) is required and third-party verification is preferred (over first-party verification).
Official website: http://www.ghgprotocol.org/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Accounting methodology</td><td rowspan="3">The GHG Protocol Product Life Cycle Accounting and Reporting Standard provides requirements and guidance for companies and other organisations willing to quantify and publicly report an inventory of the GHG emissions and removals associated with a specific product.
The Product Standard is intended to support performance tracking of a product's GHG inventory and emissions reductions over time.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment (GHG emissions)</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td></td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td><td>The owners of this scheme are the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) i.e. NGOs. The WRI is a centre for policy research and analysis regarding global resource and environmental issues. The WBCSD is a coalition of 200 international companies.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☐ No ☒</td><td>There is no built-in compliance system but guidance and requirements on verification activities are provided.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>The GHG Protocol Product Life Cycle Accounting and Reporting Standard provides requirements and guidance for companies and other organisations willing to quantify and publicly report emissions and removals generated during a product's life cycle. This includes for instance emissions related to energy consumption during production phases. Such energy consumption cannot be measured directly on the product (embedded impacts).</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">This scheme was initiated by the WRI and the WBCSD. It was implemented in 2011 and is currently in use.
In 1998, WRI and WBCSD launched an NGO-business partnership to create a standardised method for GHG accounting "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard". This standard was published in 2001 and was then used by ISO in 2006 as the basis for the 14064 series. In 2008, WRI and WBCSD launched the three-year process to develop the Product Standard. The first draft of the standard was developed in 2009, "road tested" by 38 companies in 2010, and published in 2011.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">A large number of partners provide support in publications and country programmes. For example, the Product Standard Steering Committee Members included Carbon Disclosure Project, Carbon Trust, UK Defra, Dow Chemical Company, European Commission JRC, General Electric, Natural Resource Defense Council, New Zealand Ministry of Agriculture and Forestry, Shell, Tsinghua University, Unilever, United States Environmental Protection Agency and Walmart. A similarly shaped list of funders (private companies, public institutions) helps to fund the programme. Three key parties are involved in the assurance process (i.e. compliance system): the reporting company seeking assurance, stakeholder users of the inventory report and the assurer(s) (who may be first or third party).</td></tr>
</table>

GHG Protocol – Product Life Cycle Accounting and Reporting Standard	
Scope	
Targeted products/sectors	Any company or organisation regardless of size, economic sector, location, etc
Scope of the assessment	The Product Standard allows companies to measure the greenhouse gas emissions associated with the entire life cycle of products including raw materials, manufacturing, transportation, storage, use and disposal.
Geographical scope	International
Companies using the scheme	
Over 1000 companies use this scheme. Examples of companies using this scheme include PepsiCo, Alcoa, UPS.	
Link with other schemes, link to ISO standards or other standards	
The Product Standard builds on the framework and requirements established in the ISO LCA standards (14040:2006, Life Cycle Assessment: Principles and Framework and 14044:2006, Life Cycle Assessment: Requirements and Guidelines) and PAS 2050, with the intent of providing additional specifications and guidance to facilitate the consistent quantification and public reporting of product life cycle GHG inventories. Other standards and publications such as the ILCD Handbook were used as reference during the development of this standard.	
Public information	
Public information of the Greenhouse Gas Protocol "Product Life Cycle Accounting and Reporting Standard" is available at: http://www.ghgprotocol.org/files/ghgp/Product%20Life%20Cycle%20Accounting%20and%20Reporting%20Standard.pdf	
General features of the compliance system	
Although the GHG Protocol for products is primarily a standard methodology to calculate product carbon footprint, it does include a section on the review requirements and associated verification system. The standard uses the term "assurance" to deal with the issue of the level of confidence in the results and the report. The Protocol offers guidelines on how to develop a company's inventory in order to make it more amenable to verification, as it does specify the need for verification, which is completed by independent verifiers (which can be first or third party). The Protocol is meant to improve the reliability of collected and reported data. Assurers are defined as person(s) providing assurance over the product inventory and shall be independent of any involvement in the determination of the product inventory or development of any declaration. Assurers shall have no conflicts of interests so that they can exercise objective and impartial judgment. Inherently, assurance provided by a third party offers a higher degree of objectivity and independence. Companies receiving first party assurance are required to report how potential conflicts of interests have been avoided during the assurance process.	
References	
▪ GHG Protocol official website: http://www.ghgprotocol.org ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD),2011. GHG Protocol – Product Life Cycle Accounting and Reporting Standard ▪ ISO 14040:2006 – Environmental management – Life cycle assessment – Principles and framework ▪ ISO 14044:2006 – Environmental management – Life cycle assessment – Requirements and guidelines ▪ PAS 2050:2008– Specification for the assessment of the life cycle greenhouse gas emissions of goods and services	

Global Organic Textile Standard (GOTS)

<table>
<tr><th colspan="4">Global Organic Textile Standard (GOTS)</th></tr>
<tr><td colspan="4">Brief presentation</td></tr>
<tr><td colspan="4">The Global Organic Textile Standard (GOTS) is a widely used standard for textiles made from organic fibres. It includes both environmental and social criteria along the entire organic textiles supply chain. Only textile products that contain a minimum of 70% organic fibres can obtain the GOTS. Compliance is ensured by on-site inspections of processors, manufacturers and traders performed by independent accredited bodies.
Official website: http://www.global-standard.org/</td></tr>
<tr><td colspan="4">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Seal of approval</td><td colspan="2" rowspan="2">The aim of the standard is to define globally recognised requirements that ensure organic status of textiles, addressing both environmental and social impacts.</td></tr>
<tr><td>Thematic area</td><td>▪ Environmental and social (organic textile)</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td><td colspan="2" rowspan="2">This scheme is a product-oriented scheme because in the end, the objective is to provide a credible assurance to the end consumer through the affixing of the GOTS logo on products.</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td><td colspan="2">The Global Standard gemeinnützige GmbH is the owner of the GOTS label. It is a non-profit organisation under German law.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td colspan="2">Approved certification bodies certify entities of the textile supply chain and their products according to the GOTS. The accreditation process for certification bodies has been specifically developed for GOTS. The main partner for accreditation is the International Organic Accreditation Services (IOAS) but the applying certification body may assign another accreditation body under certain conditions.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td colspan="2">Requirements relate to fibre production and processing. Requirements include social aspects, some of which cannot be verified on the product itself. For instance, there is a requirement on the percentage of fibre of organic origin.</td></tr>
<tr><td colspan="4">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="3">This scheme was initiated by the International Working Group on Global Organic Textile (IWG). It was implemented in 2006 and is currently in use. The development of GOTS began with a workshop in the Intercot Conference in 2002 where representatives from organic cotton producers, the textile industry, consumers, standards organisations and certifiers discussed the need for a harmonised organic textile standard. This workshop resulted in the creation of the IWG. The first GOTS version was published in 2006; Version 3 was published in 2011.
In 2008, the Global Standard gemeinnützige GmbH was set up by the IWG. It is the entity that conducts all the activities related to the implementation of GOTS and its related quality assurance as well as its related licensing system.
The revision process to develop GOTS Version 4.0 started in may 2013.</td></tr>
<tr><td>Stakeholders</td><td colspan="3">GOTS stakeholders are the organic cotton producers, the textile industry, consumers, standards organisations and certifiers.
The International Working Group is the key committee for all relevant structural and political issues related to the Global Organic Textile Standard programme. IGW members are the Organic Trade Association (USA), the International Association Natural Textile Industry – iVN (Germany), the Soil Association (UK) and the Japan Organic Cotton Association (Japan).
There are currently 16 approved certification bodies such as BCS Öko-Garantie GmbH, ECOCERT Greenlife, Onecert Inc., etc.
Regarding accreditation, an agreement has been signed between the IWG and International Organic Accreditation Service (IOAS), which is an organisation specialised in organic accreditation operating worldwide. IOAS is the main IWG partner for accreditation. However, a Certification Body applying for accreditation may assign another recognised national or international accreditation body (i.e. member of the International Accreditation Forum).</td></tr>
</table>

Global Organic Textile Standard (GOTS)	
Scope	
Targeted products/sectors	All types of textiles (accessories, baby wear, children's wear, fabrics, garments, home textiles, hygiene products, ladies wear, leisure wear, men's wear, non-wovens, raw fibres, socks, sportswear, technical textiles, underwear, yarns, other textile products)
Scope of the assessment	The assessment runs across processing, manufacturing, packaging, labelling, trading and distribution. The Standard is composed of mandatory criteria only (no optional criteria). These criteria cover environmental, technical quality/human toxicity and social impacts. Environmental criteria address chemical inputs, packaging materials, and management issues such as maintaining separation from conventional fibres and having an environmental policy. Social criteria include adherence to International Labour Organization (ILO) norms related to forced labour, freedom of association and collective bargaining, working conditions, child labour, living wages and non-excessive working hours.
Geographical scope	International
Companies using the scheme	
In 2011, there were 2714 certified facilities. Examples of companies using this scheme include Alnatura Produktions- und Handels GmbH, Animal Tails Ltd, ATTITUDE DEVELOPPEMENT, Coconette GmbH, Continental Clothing Company Ltd, Disana, BLUBLU, Marmot Mountain Europe GmbH, People Tree Ltd.	
Link with other schemes, link to ISO standards or other standards	
Several national organic textile standards have been completely harmonised with the GOTS. Regarding the agricultural production phase, the Global Organic Textile Standard relies on the approval of organic natural fibres based on a certification according to international or national organic farming standard, by a certification body that has a valid accreditation for the recognised standard it certifies against and that is IFOAM accredited or internationally recognised (according to ISO 65). Regarding processing and manufacturing, the Global Organic Textile Standard makes reference to several ISO testing methods. For social criteria, the standard makes reference to some provisions of International Labour Organization (ILO) social conventions.	
Public information	
The criteria and the manual for implementation are available at http://www.global-standard.org/the-standard.html Details about certification are available at: http://www.global-standard.org/certification.html, about licensing and labelling at http://www.global-standard.org/licensing-and-labelling.html Public product and producer databases that can help the public identify companies and products carrying the label are available at: http://www.global-standard.org/public-database.html Approved certification bodies are listed at http://www.global-standard.org/certification/approved-certification-bodies.html	
General features of the compliance system	
Compliance is ensured by on-site inspections of processors, manufacturers and traders. These inspections are performed by independent accredited bodies. The GOTS label is the proof of compliance. 16 approved certification bodies can carry out the GOTS certification. The validity period of a certificate must not exceed 16 months from the date of issue. In line with GOTS certification stipulations, annual on-site inspection cycle is necessary for re-certification.	
References	
▪ GOTS official website: http://www.global-standard.org/ ▪ International Working Group on Global Organic Textile Standard, 2011. Global Organic Textile Standard (GOTS) – Version 3.0 ▪ International Working Group on Global Organic Textile Standard, 2009. Approval Procedure and Requirements for Certification Bodies – Issue of 25th May 2009 ▪ International Working Group on Global Organic Textile Standard, 2009. Licensing and labelling guide – Issue of June 2nd 2009 ▪ International Working Group on Global Organic Textile Standard, 2011. Manual for the implementation of the Global Organic Textile Standard – Issue of 01 March 2011 ▪ Global Organic Textile Standard, 2012. Annual report 2012.	

Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers

<table>
<tr><th colspan="3">Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The GS-C1 Pilot Sustainability Standard for Product Manufacturers certifies socially and environmentally responsible businesses so that consumers can make informed choices. It helps companies save money by reducing the resources they use and improves their brand and sales position. The pilot standard has three leadership levels companies can meet: Bronze, or entry level, which denotes the company is making progress; Silver, which certifies the company has a solid record of achievement across most of its business; and Gold, the highest level.
Companies are required to inform Green Seal of changes to their product, service or organisation. Periodic compliance monitoring is conducted to ensure products and services continue to meet the requirements of certification. The monitoring process involves a review similar to the initial certification evaluation.
Official website: http://www.greenseal.org/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Seal of approval</td><td rowspan="2">The GS-C1 Pilot Sustainability Standard for Product Manufacturers certifies socially and environmentally responsible businesses. This label also helps to foster the development of more sustainable purchasing decisions, whether by an individual, or public or private institution. The primary intended use is external communication.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment & Social</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td><td>This standard is aimed at “product manufacturers”.</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td rowspan="2">The owner of this scheme is Green Seal, a non-profit organisation[120] funded through grants, contracts, revenue from certification, monitoring fees and special projects.</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td rowspan="2">This standard includes requirements about water use, waste management and toxicity, as well as GHG emissions.
Regarding GHG emissions, the standard requires that the company have completed a documented company-wide GHG emissions inventory (developed for EPA Climate Leaders or equivalent program such as the EPA Climate Leaders Design Principles Guidance based on the WRI/WBSCD GHG Protocol, or equivalent). The GHG inventory shall include emissions from all company and co-manufacturing facilities.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">Founded in 1989 by Rena Shulsky David, Green Seal is the first U.S. certification program of its kind, the Green Seal label is intended as a tool to help consumers and businesses make green purchasing choices and support environmentally responsible practices. At the beginning, Green Seal standards focused on sanitary products and printing/writing paper. Then, they expanded to household cleaning products. Finally, Green Seal expanded to consulting with local and state governments and to delivering audits and assessments (e.g. World Bank, Pentagon).
The original drafting of the “GS-C1 Pilot Sustainability Standard for Product Manufacturers” was released in 2009. The standard is currently in a review phase in which research of comments on the Pilot Standard is undertaken. The Draft Final Standard will then be open for stakeholder review before a review and research of comments on the Draft Final Standard is undertaken. The project will then be considered and a standard issued. No dates are provided for any of these procedures.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">Green Seal, a non-profit organisation[121] funded through grants, contracts, revenue from certification, monitoring fees and special projects</td></tr>
</table>

[120] Organisation classified as 501(c)(3) under United States Internal Revenue Code

[121] Organisation classified as 501(c)(3) under United States Internal Revenue Code

Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers	
Scope	
Targeted products/sectors	The standard's scope is broadly set at "manufacturers that have been operating for at least three months whose primary business is the manufacturing of products".
Scope of the assessment	The pilot "Sustainability Standard for Product Manufacturers" has been developed with criteria addressing transparency and accountability at the corporate level (including publicly available company-wide social and environmental policies; environmental management system; social and environmental roles and responsibilities; compliance; and publicly available annual reporting); goals, actions and achievements in major social and environmental impact areas (including workplace conditions; expanded opportunities for local communities; indigenous peoples' rights; biological diversity; social and environmental assessment; and reductions in GHG, water use, waste and toxic chemicals); supplier management practices to ensure sustainable sourcing of product raw materials, ingredients, and components; and life-cycle assessments on key product lines (with actions to reduce environmental and health impacts. Includes requirements for reducing or eliminating impacts from raw materials; manufacturing; packaging; transport; product use; and the end of product life); and requirements for third-party certification of the company's products (to verify social and environmental responsibility of products and to make it easier for consumers to reduce the negative impacts – and increase the social and environmental benefits – of their purchasing).
Geographical scope	Intended primarily for the US market.
Companies using the scheme	
None.	
Link with other schemes, link to ISO standards or other standards	
This standard makes reference to several standards such as ISO 14001, EMAS, ISO 14044, etc.	
Public information	
The Standard is available at: http://www.greenseal.org/Portals/0/Documents/Standards/GS-C1%20Std%20Dev/green_seal_pilot_company_certification_gs-c1.pdf Information regarding the standard is available at: http://www.greenseal.org/GreenBusiness/Standards.aspx?vid=ViewStandardDetail&cid=4&sid=39	
General features of the compliance system	
Since 2010, a Pilot Sustainability Standard for Product Manufacturers has been developed and is being tested. After application, the company needs to submit a documentary package to Green Seal. Based on data provided by the company, Green Seal will conduct screening LCA studies on up to 5 representative product lines. Results will be provided to company and used by the company to develop LCA action plan to reduce the life-cycle environmental impacts of its products. In addition, meetings at headquarters to review corporate sustainability policies and practices, plus on-site audits the manufacturing facilities will be performed. The auditor performing the on-site visits will focus on verifying that social and environmental policies have been effectively communicated to staff and that the policies and procedures outlined are being implemented. After the audit, the auditor provides a report documenting any corrective actions that must be taken in order to achieve certification. Any corrective actions must be addressed within 120 days of the receipt of the post-audit report. Once the company meets all requirements for certification, Green Seal will grant the license to use the Green Seal Certification Mark in promotion and advertising. A few months prior to the anniversary date of certification, Green Seal will be in contact to schedule a monitoring evaluation. The ongoing compliance monitoring verifies that procedures put in place for certification continue to be followed. To maintain certification bronze level-certified companies must meet the silver requirements within three years of initial certification.	
References	
▪ Official website: http://www.greenseal.org/ ▪ Green Seal, 2009. Green Seal – GS-C1 Pilot Sustainability Standard for Product Manufacturers – First edition ▪ Green Seal, 2009. 5 Steps to GS-C1 Certification ▪ ISO 14044:2006 – Environmental management – Life cycle assessment – Requirements and guidelines ▪ ISO 14001:2004– Environmental management systems – Requirements with guidance for use	

Green Seal – Products and services

Green Seal – Products and services		
Brief presentation		
Green Seal is a wide-ranging and comprehensive ISO 14024 – Type I ecolabel. Green Seal has developed life cycle-based standards that aim to reduce the environmental and social impacts of products and services. Green Seal offers third-party certification services for a wide range of products and services from household, institutional cleaning and paper products to paints as well as cleaning services and hotels. **Official website:** http://www.greenseal.org/		
Key features		
Nature of the scheme	▪ Type I Ecolabel	Green Seal is an independent label that allows companies to make improvements to the environmental and social impacts of their product and to communicate this performance to the public. It also contributes to fostering the development of more sustainable purchasing decisions, whether by an individual, a public or a private institution.
Thematic area	▪ Environmental and social	
Scope of the scheme	☒ Product ☐ Organisation	The label covers both products and services (e.g. cleaning services, restaurants and food services).
Regulatory framework	☒ Voluntary ☐ Mandatory	Although the use of the label is voluntary, Green Seal is quoted in purchasing policies of several states in the United States. Several US municipalities purchase green products based on Green Seal certification.
Scheme owner	☐ Public ☒ Private	The owner of this scheme is Green Seal, a non-profit organisation[122] funded through grants, contracts, revenue from certification, monitoring fees and special projects.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	Third-party certification activities are required. The certification division of Green Seal carries out these certification activities.
	Invisible characteristics Yes ☒ No ☐	According to the product category, some requirements can relate to invisible impacts. For instance, there is a requirement on the composition of the fibre for sanitary paper (percentage of fibre from recovered material, from agricultural residue, etc.).
Context and scheme status		
History and future developments	Founded in 1989 by Rena Shulsky David, Green Seal is the first U.S. certification program of its kind, the Green Seal label is intended as a tool to help consumers and businesses make green purchasing choices and support environmentally responsible practices. At the beginning, Green Seal standards focused on sanitary products and printing/writing paper. Then, they expanded to household cleaning products. Finally, Green Seal expanded to consulting with local and state governments and to delivering audits and assessments (e.g. World Bank, Pentagon).	
Stakeholders	Green Seal has developed several partnerships with external companies that provide communication support, training (e.g. training on green cleaning) and assistance for public institutions in the preparation for certification.	
Scope		
Targeted products/sectors	Targeted products come under the general headings: household products; personal care products; construction materials and equipment; paints and coatings; printing and writing paper; paper towels, napkins and tissue paper; food packaging; institutional cleaning products; and hand soaps and cleaners. Targeted services are under the headings: cleaning services, hotels and lodging properties.	
Scope of the assessment	Criteria address environmental and regulatory compliance management, as well as component/ingredient aspects and product performance. Products, services, and company categories are evaluated using a life cycle approach to ensure that all significant environmental and social impacts are considered in the development of a standard, from raw materials extraction through manufacturing to use and disposal.	

[122] Organisation classified as 501(c)(3) under United States Internal Revenue Code

Green Seal – Products and services	
Geographical scope	Green Seal does work internationally through mutual recognition agreements with other national ecolabelling programs. Technically, the Green Seal Certification Mark may be used in foreign markets provided purchasers are given information explaining the basis for the Mark. In most cases however, Green Seal is used in the United States and the ecolabelling program of another country is used for its own market.
Companies using the scheme	
Examples of companies using the scheme include 3M, Aramark, Office Depot, Rubbermaid, Cascades Tissue Group, University of Maryland Housekeeping Unit, PortionPac, Clorox, California Green Clean.	
Link with other schemes, link to ISO standards or other standards	
Green Seal procedures have been reviewed by third parties and found to meet the standards and guidelines of ISO 14020/14024 standards, the American National Standards Institute Requirements for American National Standards, the Global Ecolabelling Network's Internationally Coordinated Ecolabelling System (GENICES) as well as the Consumers' Union "What Makes a Good Ecolabel".	
Public information	
Green Seal Standards are publicly available at: http://www.greenseal.org/GreenBusiness/Standards.aspx A database of products and services bearing the Green Seal label is available at: http://www.greenseal.org/FindGreenSealProductsAndServices.aspx	
General features of the compliance system	
This label is made up of life cycle-based sustainability criteria of environmental and human health nature. Criteria can be mandatory or optional with the assumption that at least all mandatory criteria are met. A compliance system exists but the verification checks are only described as periodic. Label-bearers are required to inform Green Seal of any changes to their products/services/organisation. Following completion of an application for certification, a Green Seal project manager contacts the company to begin the evaluation process. The project manager guides the company through the data submission process, starting with information already available on the product(s)/service and identifying further data needs. The evaluation process typically takes several months but more time may be needed if additional testing is required. Should a product or service fail to meet the requirements for certification, Green Seal informs the company of the reason(s). In most cases, companies are able to modify their original submissions in order to achieve certification. When the evaluation is near completion, an auditor conducts the on-site audit of the manufacturing facility or service location. The auditor gives the company an audit report with the corrective actions that must be addressed within 120 days of receipt of the audit report. Once the requirements of the Green Seal standard are met, certification is awarded and the company is granted license to use the Green Seal Certification Mark on pre-approved materials. Periodic compliance monitoring is conducted to ensure that products and services continue to meet the requirements of certification. The monitoring process involves a review similar to the initial certification evaluation.	
References	
▪ Green Seal website: http://www.greenseal.org/ ▪ ISO 14020:2000 – Environmental labels and declarations – General principles ▪ ISO 14024:1999 – Environmental labels and declarations – Type I environmental labelling – Principles and procedures	

GS Mark

GS Mark		
Brief presentation		
The GS Mark is an official German mark that aims at verifying the security of technical products and consumer products. Although optional (voluntary), the GS Mark is subject to a governmental regulatory regime as it is included in the German Equipment and Product Safety Act. The GS Mark conveys that the legally required safety level has been achieved. In order to deliver the mark, an independent body carries out an initial factory audit and tests on the products. The certificate is valid for five years. Every year, a quality system audit takes place and potential modifications regarding the initial technical documents delivered are verified. Compared to CE marking, the GS Mark guarantees that the product complies with additional rules relative to health and safety at the time of putting the product on the market. In 2007, most GS-marked products (80%) carry CE marking as well. **Official website:** http://www.bmas.de and http://www.zls-muenchen.de/		
Key features		
Nature of the scheme	▪ Conformity mark	The GS Mark is a voluntary label that aims at verifying the security of technical products and consumer products. It can be seen as a consumer product safety mark.
Thematic area	▪ Quality & Safety	
Scope of the scheme	☒ Product ☐ Organisation	"Product" must be understood in the sense of a "ready-to-use" product, according to the ProdSG law, §2.
Regulatory framework	☒ Voluntary ☐ Mandatory	Although voluntary, the GS Mark has a legal status in the German Product Safety Act – ProdSG.
Scheme owner	☒ Public ☐ Private	The owner of this scheme is the German Federal Ministry of Labour and Social Affairs (BMAS).
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	The GS Mark and certificate are obtained from accredited certification bodies and test laboratories. Detailed verification procedures required for GS marking are not published.
	Invisible characteristics Yes ☒ No ☐	Verification of manufacturing processes during factory inspection.
Context and scheme status		
History and future developments	The GS Mark is one of the leading safety marks. It was introduced in 1977 by the German authorities. The letters "GS" stand for the term "Geprüfte Sicherheit" which means "Safety tested". In 2004, the GS Mark was included in the Act for the Safety of Devices and Products (GPSG). Consequently, the number of GS licences increased significantly. On December 1st, 2011, the German Product Safety Act (Produktsicherheitsgesetz - ProdSG) entered into force, replacing the previous (GPSG). The voluntary GS mark is designed to certify the conformity of the product according to the provisions in force in the ProdSG. This law governs GS Mark.	
Stakeholders	The label is owned and managed by the German Federal Ministry of Labour and Social Affairs. The Zentralstelle der Länder für Sicherheitstechnik (ZLS, central office of Länder for the engineering of safety) accredits independent bodies (GS bodies) that award the label. Authorised GS bodies can operate in Germany or abroad and include companies such as SGS, TUV SUD, LNE (France), etc. The State Ministries for Consumer Protection are responsible for market surveillance in Germany.	
Scope		
Targeted products/sectors	Ready-to-use products Examples of products on which the GS mark can be found include Air-Cleaners, CD players, Home A/V Equipment, Coffee Mills & Grinders, Commercial Deep Fryers, Household Appliances, Lab/Measurement Equipment, Luminaires, Office/IT Equipment, Power Tools, Pumps for Liquids, Range Hoods, Sports Equipment, Office Furniture, Toys.	
Scope of the assessment	During factory inspection, independent bodies evaluate the implementation of the quality system, the production environment and the production-related testing and measurement equipment.	

GS Mark	
Geographical scope	It has been designed for the German market but it is now international in the sense that non-German companies are applying for the mark and the mark is visible on products sold outside Germany and outside the EU.
Companies using the scheme	
As of 2011, 60 000 licences GS-Mark had been issued.	
Link with other schemes, link to ISO standards or other standards	
The product has to comply with the German Product Safety Act (ProdSG) which replaces the German Equipment and Product Safety Law (GPSG) since 2011. Regarding the link with CE marking, the GS mark guarantees that the product complies with additional rules relative to health and safety at the time of putting the product on the market[123]. Manufacturers often find it convenient and economical to obtain the GS-mark together with the legally required CE Marking.	
Public information	
The list of authorised GS bodies that award the GS mark is available at: http://www.baua.de/de/Produktsicherheit/Pruefstellenverzeichnisse/Kontrolle-GS-Zertifikate/Suche%20nach%20GS-Pr%C3%BCfstellen/GS-Pr%C3%BCfstellen.html General certification rules are available on the websites of authorised GS bodies such as LCIE or LNE. Unlike most certification schemes, the GS Mark is based on detailed test procedures that are not published in the public domain.	
General features of the compliance system	
The GS mark is a type-approval mark, connected with periodic factory inspections observing the production quality. Certification must be asked for by the entity who puts the product on the market. It can be a manufacturer or an entity who transforms or modifies the product. In order to deliver the mark, an independent body carries a review of the product(s)'s technical file, an initial quality system audit and testing on a sample of products. The certificate is valid for five years. To maintain the GS mark, the law demands frequent checks (usually annually or every two years depending on the product) to ensure that the manufacturer is able to maintain all the specifications of the tested product in his mass production. Every year, a quality system audit takes place and potential modifications regarding the initial technical documents delivered are verified. ZLS is responsible for the accreditation of the certification bodies, most of which are in Germany.	
References	
▪ EFTA, 2008. Certification and Marks in Europe – A Study commissioned by EFTA ▪ Laboratoire National de métrologie et d'Essais (LNE), 2012. Règles générales d'attribution et de contrôle de la marque GS par le LNE. Rév. 5. ▪ Laboratoire Central des Industries Electriques (LCIE), 2012. Certification rules GS mark by LCIE – Edition n° 8	

[123] Note however that the alleged additional GS mark requirements compared to CE marking cannot be identified, as the detailed test procedures required for GS marking are not published.

International Fairtrade Certification Mark

International Fairtrade Certification Mark		
Brief presentation		
In this scheme, social, economic, and environmental conditions of production and trade are certified against Fairtrade Standards. There are different general standards for Producers (depending on the type of producers) and Traders which are supplemented by product-specific standards. The certification process includes an initial audit performed by FLO-CERT, which verifies the operator organization and a surveillance audit every year. The certificate is valid for three years, the permission to trade for four years. For small licensees (clients), the certificate is valid for six years with a simplified compliance verification process (surveillance audit only the third year). **Official website:** http://www.fairtrade.net/		
Key features		
Nature of the scheme	▪ Seal of approval	The Fairtrade Mark is primarily intended for use on product packaging. The mark relies on a certification system to ensure that the conditions of production and trade of products are socially and economically fair as well as environmentally responsible. This includes the following aspects: ▪ Social – Access of small-scale producers to the market, respect of social rights, including the prohibition of forced labour and child labour; ▪ Economic – Fair prices and premiums to producers. Financial advance provided by buyers to facilitate investment; ▪ Environmental – Good environmental practices (and promotion of organic farming).
Thematic area	▪ Sustainable development (Fair trade)	
Scope of the scheme	☒ Product ☐ Organisation	The requirements are on the entire value chain of the products (i.e. production and trade).
Regulatory framework	☒ Voluntary ☐ Mandatory	The scheme is a voluntary one. Nonetheless, Fairtrade products can be mentioned as a welcomed option in sustainable procurement policies of public entities.
Scheme owner	☐ Public ☒ Private	The owner of this scheme is Fairtrade Labelling Organizations International (FLO International). It is a private organisation. Fairtrade Labelling Organizations International is a non-profit, multi-stakeholder body that is responsible for the strategic direction of Fairtrade. It sets Fairtrade standards and supports producers.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	Certification activities are carried out by FLO-CERT.
	Invisible characteristics Yes ☒ No ☐	Requirements relate to production and trade conditions that cannot be verified or measured directly on the product, such as a fair price for small producers, no child work, etc.
Context and scheme status		
History and future developments	The first fair trade label called "Max Havelaar" was founded in 1988 under the initiative of Solidaridad, the Dutch development agency. In the following years, other fairtrade marks were created in Europe and North America. In 1997, Fairtrade Labelling Organizations International (FLO) was established in Bonn, Germany to unite the labelling initiatives under one umbrella and harmonise worldwide standards and certification. The international Fairtrade certification mark that is currently in use was launched in 2002 by FLO. The goals of the launch were to improve the visibility of the Mark on supermarket shelves, facilitate cross border trade and simplify export procedures for both producers and exporters. In 2004, Fairtrade International split into two independent organisations: FLO, which sets Fairtrade standards and provides producer support, and FLO-CERT, which inspects and certifies producer organisations and audits traders. FLO-CERT is in compliance with the ISO 65 standard.	

International Fairtrade Certification Mark	
Stakeholders	The Fairtrade Mark is a registered trademark of FLO. FLO-CERT is an independent certification company, owned by FLO. FLO-CERT verifies compliance with Fairtrade Standards. FLO-CERT does not have a Certification Mark as part of its certification system. FLO-CERT awards certificates of conformity. Once certified by FLO-CERT, operators may contact Fairtrade International or a Labelling Initiative in order to obtain the right to use the Fairtrade Certification Mark. Fairtrade labelling initiatives are national organisations and members of FLO, responsible for licensing Fairtrade Mark on products as well as promoting Fairtrade in their territory. There are currently 19 Fairtrade labelling initiatives covering 24 countries in Europe, North America, Japan, Australia and New Zealand. A labelling initiative has the right to sub-license the Fairtrade Mark to licensees and third-parties within their area. Some labelling initiatives are responsible for trade audits in their territories.
Scope	
Targeted products/sectors	Mostly agricultural products – coffee, tea, chocolate, fruits, plants, sugar, etc. – but also gold and sports balls. It is interesting to notice that FLO-CERT do not certify handicrafts. They say: "Fairtrade certification and its system of minimum pricing were designed for commodity products. It is technically difficult to adapt this model of standardised minimum pricing to crafts and other products made by small-scale artisans, which are each unique and have highly varied production processes and costs".
Scope of the assessment	The Fairtrade standards contain requirements on the entire value chain, including producers and trade parties.
Geographical scope	International
Companies using the scheme	
In 2009, there were 827 Fairtrade certified producer organisations in 58 producing countries, representing over 1.2 million farmers and workers. It is estimated that roughly 27,000 Fairtrade Certified products are now sold in more than 70 countries. Companies using the scheme include Ethicable, Alter Eco, Mars, etc.	
Link with other schemes, link to ISO standards or other standards	
In its Fairtrade standards, FLO makes reference to certain internationally recognised standards and conventions, particularly those of the International Labour Organization (ILO). In addition, FLO also requires that national legislations should be respected even if they set higher requirements than the Fairtrade Standards. FLO-CERT certification is compliant with ISO 65[124].	
Public information	
All Fairtrade standards are available at: http://www.fairtrade.net/our-standards.html FLO has a set of generic standards related to production and trade: ▪ Production standards are based on initial requirements and progress requirements: there are standards for small producers' organisations; standards for hired labour; standards for Contract production; ▪ Trade standards certify the trading relationship between the certified producers, the possible intermediary operators (who have to pay registration fees), and the licenses (who pay a license to the national fair-trade initiative to use the mark); ▪ Additional standards apply to specific products and types of producer. Compliance Criteria are established by FLO-CERT to translate requirements of the Fairtrade Standards and FLO-CERT certification policies into verifiable control points that are evaluated during the certification process to verify compliance with the Fairtrade Standards. Compliance criteria documents are available at: http://www.flo-cert.net/flo-cert/37.html FLO-CERT also has a database of all the fairtrade-certified organisations by product and region. The database is available at: http://www.flo-cert.net/flo-cert/29.html.	

[124] This standard has been revised by: ISO 17065:2012 but FLO-CERT does not mention its compliance with ISO 17065

International Fairtrade Certification Mark
General features of the compliance system
The genera features of the compliance system are the following: ▪ **Application process** – The applicant fills a demand for certification. In case of traders, a Permission to Trade letter is issued to allow the applicant to realise Fairtrade transactions for 9 months. ▪ **Initial audit** – An external auditor performs an initial on-site inspection. For producer organisations, random checks of a representative sample of farmers are also performed. ▪ **Evaluation** – After the audit, a report and the score of the applicant for each compliance criterion is sent to FLO-CERT for evaluation. If no major non-conformities are identified, the applicant receive a Permission to Trade letter valid 9 months ▪ **Certification** – Once the non-conformities are fixed, the audited organisation receives a certificate valid for four years. For small licensees (clients), the Permission to Trade is extending twofold for three years with a simplified compliance verification process. The sixth year, if the certification is renewed, the licensees receive a certificate valid for six years. ▪ **Surveillance** – At least one surveillance audit per year (except for small licensees) is carried out to evaluate continue compliance. In some circumstances, where organizations have demonstrated excellent compliance over many years, they may qualify for a "desk-top" review as part of a three-year inspection cycle. After three years (six years for small licensees), an on-site renewal audit has to be performed.
References
▪ Fairtrade International, 2011. Fairtrade Standard for Small Producer Organizations – Version: 01.05.2011_v1.1 ▪ Fairtrade International, 2011. Fairtrade Standard for Hired Labour – Version: 01.05.2011 ▪ Fairtrade International, 2011. Fairtrade Standard for Contract Production – Version: 01.05.2011_v1.1 ▪ Fairtrade International, 2011. Generic Fairtrade Trade Standard – Version: 01.05.2011_v1.1 ▪ ISO Guide 65:1996 – General requirements for bodies operating product certification system ▪ FLO-CERT GmbH – Public Compliance Criteria Lists – Available at: http://www.flo-cert.net/flo-cert/37.html

Japan Environmental Management Association for Industry – EcoLeaf Environmental label

<table>
<tr><th colspan="3">Japan Environmental Management Association for Industry – EcoLeaf Environmental label</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">EcoLeaf is a Japanese ISO Type III environmental label that uses LCA to assess the environmental impact of products through their entire life cycle. Although it respects ISO standards and appears to have a thorough initial conformity check system, there does not appear to be any follow-up compliance check once the label has been awarded.
Official website: http://www.ecoleaf-jemai.jp/eng/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Type III Ecolabel</td><td rowspan="3">The EcoLeaf programme encourages companies to provide quantitative information on the environmental impact of the products they sell.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td></td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>The owner of this scheme is the Japan Environmental Management Association for Industry (JEMAI). It is a public corporation established under the Ministry of Economy, Trade and Industry (METI). About 1,100 companies are members of JEMAI.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>There is an initial verification prior to public release of the label but apparently, there are no surveillance activities.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>A life cycle assessment of the product under consideration is performed. Consequently, "embedded" impacts are taken into account. "Embedded" environmental impacts relate to the production processes (e.g. CO_2 emissions coming from fossil energy use during manufacturing) or to the end-of-life (e.g. emissions to the air or the soil in landfills).</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">In 1998, the Japan Environmental Management Association for Industry (JEMAI), with support from the Japanese Ministry of Economy, Trade and Industry (METI), began developing a program for Type III environmental declarations. In 1999 and 2000, it introduced trial programs. In 2002, the EcoLeaf Environmental Label was introduced.
In 2009, the Japanese government decided to introduce carbon-footprint labelling as one of the ways to help reduce CO_2 emissions throughout each stage in a product's supply-chain. The Japan's Carbon Footprint System began with a trial period. The governmental Japanese CFP (Carbon Footprint of Products) Pilot Project was completed in March 2012. Since April 2012, JEMAI has taken over the Japanese CFP scheme and has officially started the operations of the "CFP Communication Program" (see http://www.cfp-japan.jp/english/)</td></tr>
<tr><td>Stakeholders</td><td colspan="2">Stakeholders include the Japanese Ministry of Economy, Trade and Industry. Compliance is verified by independent verifiers appointed by JEMAI.</td></tr>
<tr><td colspan="3">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="2">To date, 79 Product Category Rules (PCRs) have been developed. These PCRs cover a wide range of products (e.g. electrical and electronic products, machinery, construction, stationery and office supply).</td></tr>
<tr><td>Scope of the assessment</td><td colspan="2">All stages of the product life cycle from the extraction of resources to manufacturing, assembly, distribution, use, discarding and recycling</td></tr>
<tr><td>Geographical scope</td><td colspan="2">Japan</td></tr>
</table>

Japan Environmental Management Association for Industry – EcoLeaf Environmental label
Companies using the scheme
Examples of companies using this scheme include Canon Inc, Fuju Xeroz Co. Ltd., Konika Minolta, Panasonic System Networks Co. Ltd.
Link with other schemes, link to ISO standards or other standards
EcoLeaf is in conformity with the ISO 14025 type III environmental declarations standard. JEMAI is a member of GEDnet (Global Type III Environmental Product Declarations Network, http://www.gednet.org/). Conformity with ISO 14025 implies conformity with ISO 14040-44.
Public information
The Product Category Rules (PCRs) are available at: http://www.ecoleaf-jemai.jp/eng/pcr.html Guidelines of the program are available at: http://www.ecoleaf-jemai.jp/eng/data/EcoleafGuideline_ver.1.pdf
General features of the compliance system
An independent verification of the label and data according to ISO 14025 is required. Verification can be carried out either internally or externally. External verification applies to companies whose data collection system has not been certified. The verification standards and the qualification of external verifiers are the same as those for internal verification. External verifiers should submit the verification results report to the EcoLeaf program office. If a company demonstrates a certain level of performance on its internal management system (procedures for data collection/processing, verification, and publication), then the company can be certified to verify its own data collection. This is referred to as "System Certification". System certification is granted by system auditors, which must be qualified by JEMAI, have at least the level of knowledge and technical competence required by the EcoLeaf environmental labelling program, and be registered as qualified auditors. Once the company has obtained System Certification, it can verify collected data internally (internal verification) and thereby manage label development and publication work by itself for three years. The company should appoint two internal verifiers (lead verifier and deputy verifier) who are independent of the label preparation process. They verify the appropriateness of the environmental data on the label. An internal verifier must have the level of knowledge and technical competence required by the program. The internal verifier must also be registered as qualified verifier. Internal verifiers should submit a set of verification documents to the EcoLeaf program office. The EcoLeaf programme review committee delivers judgment on the result of the certification review conducted by system certified auditors or on the result of verification conducted by external verifiers. The review committee members are LCA experts who have knowledge of ISO environmental labels and knowledgeable consumers. There does not appear to be a monitoring of compliance once the label has been awarded.
References
▪ Ecoleaf Official website: http://www.ecoleaf-jemai.jp/eng/ ▪ Japan Environmental Management Association for Industry (JEMAI), 2002. Quantitative Environmental Information Label (ISO Type III Environmental Declarations) – Guidelines for the Introduction of the ECO-LEAF Environmental Label – First Edition ▪ Japan Environmental Management Association for Industry (JEMAI). System Certification Form 3 (F-12-01) – Requirements for Product Environmental Data Integration System ▪ ISO 14025:2006 – Environmental labels and declarations – Type III environmental declarations -- Principles and procedures ▪ ISO 14040:2006 – Environmental management – Life cycle assessment – Principles and framework ▪ ISO 14044:2006 – Environmental management – Life cycle assessment – Requirements and guidelines

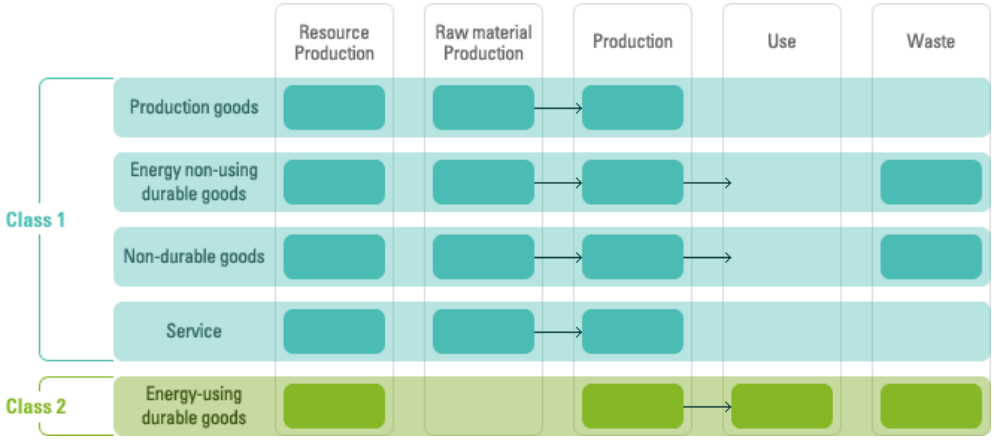
Japan Tokyo Metropolitan Government Emission Trading Scheme

Japan Tokyo Metropolitan Government Emission Trading Scheme		
Brief presentation		
The Japan Tokyo Metropolitan Government Emission Trading Scheme is a mandatory GHG emissions reporting and reduction policy. Companies are required to report their emissions on an annual basis during a five-year compliance period from 2009 to 2014. The initiative institutes a cap-and-trade scheme for large facilities that aims to achieve reductions in GHG emissions. There is a compliance system (verification of reporting) in place to assess emissions levels and reduction measures. **Official website:** http://www.kankyo.metro.tokyo.jp/en/climate/cap_and_trade.html		
Key features		
Nature of the scheme	▪ Reporting process and reduction policy	The intended use of this scheme is the reduction of GHG emissions through reporting obligations, reduction obligations, and emission trading.
Thematic area	▪ Environment (GHG emissions)	
Scope of the scheme	☐ Product ☒ Organisation	The Tokyo Metropolitan Government (TMG) Emission Trading Scheme requires large facilities to submit and to make public their annual emissions reports and emissions reduction plans. Under the Tokyo cap-and-trade program, each covered facility is required to reduce its emissions by 8% (commercial sector) or by 6% (industrial sector). Companies with a reduction obligation can choose to reduce their own GHG emissions or to buy credits from other companies that reduced their emissions more than their target. The quantity of emission credits and their price are negotiated among the market participants. TMG offers credits on the market to projects carrying out the installation of solar energy equipment in households and energy saving activities in small and medium facilities.
Regulatory framework	☐ Voluntary ☒ Mandatory	
Scheme owner	☒ Public ☐ Private	The owner of this scheme is the Tokyo Metropolitan Government (TMG).
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	Verification by a registered verification agency is required.
	Invisible characteristics Yes ☒ No ☐	Scope 1 and 2 emissions are taken into account. Scope 2 includes indirect impacts (e.g. indirect emissions from purchased energy).
Context and scheme status		
History and future developments	Since 2007, TMG has been analysing several strategies for climate change mitigation. In 2008, the Governor of Tokyo, Shintaro Ishihara, submitted a bill to the second regular meeting of the Tokyo Metropolitan Assembly that introduced mandatory targets for GHG emissions for large-scale emitters as part of an emissions trading program. The Tokyo Metropolitan Assembly passed the bill, thus introducing Japan's first cap-and-trade emissions trading program. The Emission Trading Scheme was launched in 2010.	
Stakeholders	Tokyo Metropolitan Government	
Scope		
Targeted products/sectors	Large emitters are targeted. The facilities with CO_2 reduction obligations are those with a consumption of fuels, heat and electricity of 1,500 kL or more in crude oil equivalent (COE) in the previous three years.	
Scope of the assessment	Scope 1 and 2 emissions	
Geographical scope	Tokyo metropolitan area	

Japan Tokyo Metropolitan Government Emission Trading Scheme
Companies using the scheme
In 2012, 1,348 facilities were required to take part in the Emissions Trading Scheme. 1,159 of them submitted the required report.
Link with other schemes, link to ISO standards or other standards
No direct references to other schemes or standards are made.
Public information
Information on the emissions of the companies covered by the scheme is made public on the TMG webpage. The calculation method is based on emission intensity standards communicated by TMG. There is no reference made to other existing standards. A Guideline for Monitoring and Reporting Energy-Related CO2 Emissions is available. Emission intensity standards were created based on covered facilities data (2005-2007) in a previous Carbon Reduction Reporting Program. The list of Registered verification agencies is available at: http://www.kankyo.metro.tokyo.jp/climate/large_scale/authority_chief/registered_agency.html
General features of the compliance system
Annual verification by a registered verification agency is required. Verification includes emission levels and reduction measures. TMG approves and makes public on its website the data provided by the company and verified by the verification agency. A verification agency must be registered with the Governor of Tokyo. Verifiers must pass the TMG Training Course and have an experience of at least ten cases in the past three years on either energy-saving diagnostic work, ISO14001 audit, CDM activation audit/verification work, or verification work for Emission Trading Trial Scheme/National Credit Scheme/JVETS/J-VER. If companies do not reach their target, information on their non-compliance is disseminated; they are obliged to buy credits and are subject to a monetary fine. The quantity and price of emission credits are negotiated among the market participants. TMG offers credits on the market, which corresponds to projects carrying out the installation of solar energy equipment in households and energy saving activities in small and medium facilities.
References
▪ Bureau of Environment Tokyo Metropolitan Government, 2012. The Tokyo Metropolitan Environmental Security Ordinance "Tokyo Cap-and-Trade Program" for Large Facilities – Detailed Documents ▪ Tokyo Metropolitan Government – Bureau of Environment Urban and Global Environmental Division, 2012. The Tokyo Cap-and-Trade Program achieved 23% reduction in the 2nd year ▪ Bureau of the Environment Tokyo Metropolitan Government, 2010. Tokyo Cap-and-Trade Program – Japan's first mandatory emissions trading scheme

Korean Carbon footprinting labelling programme

<table>
<tr><th colspan="3">Korean Carbon footprinting labelling programme</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The objective of the Korean Carbon footprinting labelling programme is to promote the purchasing of low-carbon goods and services as well as to encourage companies to develop and use low-carbon technologies.
The Korean carbon labelling programme awards two types of certificates:
▪ The Carbon Emission Certificate (Step 1 certificate) – This type of certificate indicates the life cycle GHG emissions associated with the product or service;
▪ The Low-Carbon Product Certificate (Step 2 certificate) – Besides giving the lifecycle GHG emissions associated with the product/service, this type of certificate guarantees that the product satisfies the minimum reduction target set by the government based on the carbon footprint labelling of the product concerned.
A compliance system exists. It includes an initial audit and annual surveillance checks performed by the Korea Environmental Industry and Technology Institute (KEITI).
Official website: http://www.edp.or.kr/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Quantitative environmental labelling (carbon)</td><td rowspan="3">GHG emissions generated throughout the lifecycle of a product are calculated and the result is displayed in CO_2-equivalent on the product.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment (GHG Emissions)</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td rowspan="2">The “owner” of this voluntary scheme is the Korea Environmental Industry and Technology Institute (KEITI). It is a public entity.
KEITI developed the Product Category Rules (PCRs) of this carbon footprint labelling programme and manages the Carbon Footprint Labelling Certificate.</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>There is an initial audit as well as annual checks to make sure the labelled goods and services respect the PCRs.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>This scheme takes into account embedded impacts. Indeed, the carbon footprint of a product accounts for GHG emissions generated throughout its life cycle. This includes, for instance, emissions related to energy consumption during the production and transportation. Such emissions cannot be measured directly on the product.</td></tr>
</table>

Korean Carbon footprinting labelling programme	
Context and scheme status	
History and future developments	This scheme is operated by KEITI. It was implemented in 2009 and is currently in use. In 2005, the Korean Institute of Environmental Science and Technology (KIEST) and the Korea Eco-Products Institute (KOECO) became legal entities. In August 2008, a decision was made to merge KIEST and KOECO. In April 2009, the Korea Environmental Industry and Technology Institute was launched. Between May and December 2008, a pilot project for carbon labelling has been tested. In February 2009, the Korean Carbon Footprint Labelling program was launched and PCRs published. The Notification No. 2009-10 of the Korea Ministry of Environment establishes the rules for Carbon footprint labelling .
Stakeholders	KEITI is a government agency founded in 2009 in accordance with the Development of Environmental Technology and Support for Environmental Industry Act. An organisation chart of the agency is available at: http://www.edp.or.kr/carbon/english/about/about_org.asp. The general authority of the Korean Carbon footprinting labelling programme is the Korea Ministry of Environment. KEITI is responsible for the development of the PCRs and manages the Carbon footprint labelling certificate. It also performs annual surveillance checks on products/services to make sure they respect the PCRs. The Korea Environment Preservation Association (KEPA) develops a programme for certificate judges. A chart summarizing the operation system is available at: http://www.edp.or.kr/carbon/english/system/system_line.asp
Scope	
Targeted products/sectors	All products, with the exception of agricultural products, fishery and livestock products, forest products, pharmaceutical products and medical equipment
Scope of the assessment	The scope of the assessment is the life cycle. A schematic overview of the life cycle stages to be considered for each product category (i.e. production goods, energy non-using durable goods, non-durable goods, service, and energy-using durable goods) is available at: http://www.edp.or.kr/carbon/english/auth/auth_intro.asp.  *Source: KEITI, EDP website*
Geographical scope	Korea
Companies using the scheme	
Examples of companies using the carbon emission certification include Oriental Brewery Ltd., LG Household and Health Care, Tetra Pak Ltd, Asiana Airlines. Inc, Samsung Electronics Co, Ltd., Kia Motors Corporation. Examples of companies using the low-carbon certification include LG Electronics Inc., Samsung Electronics Co, Ltd., Coca Cola Beverage Company, Hyundai Motor Company, Kia Motors Corporation.	
Link with other schemes, link to ISO standards or other standards	
The ISO standards (ISO 14040, ISO 14025, ISO 14064), the PAS 2050 standard, the Korean EDP common standard, the GHG Protocol – Product Standard, and the IPCC reports have been taken into account when establishing the rules for Korean carbon footprint calculation.	

Korean Carbon footprinting labelling programme
Public information
The application procedure is available at: http://www.edp.or.kr/carbon/english/auth/auth_intro.asp. Guidelines for carbon footprint of products are available at: http://www.edp.or.kr/carbon/english/rule/rule_list.asp. Carbon footprint assessment results are publicly available on the Korean EDP website. The list of products with carbon emission certificates is available at: http://www.edp.or.kr/carbon/english/list/list.asp?category=1 The list of products with low carbon emission certificates is available at: http://www.edp.or.kr/carbon/english/list/list.asp?category=2
General features of the compliance system
Little information regarding the compliance system is available in English. ▪ Companies requesting a carbon footprint labelling certificate must submit an application form and a report of the product carbon footprint results. The carbon footprint calculations must be performed in accordance with the PCRs. ▪ The certification procedure includes a document review and an initial audit performed by KEITI. ▪ If KEITI issues a certificate, the applicant must then submit a plan for the use of the Carbon footprinting labelling. If KEITI approves the plan for the use of labelling, the Carbon footprinting labelling can be used. ▪ KEITI performs surveillance checks at least once a year. ▪ System improvement requests are to be made to the general authority. Requests for the development of guidelines are to be made to KEITI since it is the organisation responsible for the provision of guidelines and for the development of PCRs.
References
▪ Official website: http://www.edp.or.kr/ ▪ IPCC, 1996. Guidelines for National Greenhouse Gas Inventories ▪ ISO 14025:2006 – Environmental labels and declarations – Type III environmental declarations – Principles and procedures ▪ ISO 14040:2006 – Environmental management – Life cycle assessment – Principles and framework ▪ ISO 14044:2006 – Environmental management – Life cycle assessment – Requirements and guidelines ▪ KEITI (2009), revised in 2011. Guidelines for carbon footprint of products ▪ PAS 2050:2008– Specification for the assessment of the life cycle greenhouse gas emissions of goods and services ▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD),2011. GHG Protocol – Product Life Cycle Accounting and Reporting Standard

Korean Environmental Declaration of Products (EDP)

<table>
<tr><th colspan="4">Korean Environmental Declaration of Products (EDP)</th></tr>
<tr><td colspan="4">Brief presentation</td></tr>
<tr><td colspan="4">The Korean Environmental Declaration of Products is a Type III Environmental Declaration, which provides information about the natural resources used and the pollutants emitted during the life cycle of a product.
A compliance system exists. It includes examinations and surveillance activities but very little information is available in English.
Official website: http://www.edp.or.kr/</td></tr>
<tr><td colspan="4">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Type III Ecolabel</td><td colspan="2" rowspan="3">This Type III Environmental Declaration is used for external communication.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td colspan="2" rowspan="2">The owner of this voluntary scheme is the Korea Environmental Industry and Technology Institute (KEITI), a public agency.</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td colspan="2">A compliance system exists and includes examinations. Compliance should be verified at least once a year.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td colspan="2">The applicant must perform a life cycle assessment (LCA) using the PCRs. As an LCA of the product under consideration is performed, "embedded" impacts are taken into account.</td></tr>
<tr><td colspan="4">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="3">The Korean Environmental Declaration program was initiated by KEITI. It was established in 2001 and is currently in use.
In July 2005, the Korean Ministry of Environment enacted "The Promotion of Purchase of Environmentallly Friendly Products Act". In September 2005, it reorganised the Korea Eco-Labelling Association to the Korea Eco-Products Institute in order to support the purchasing of eco-friendly products.
In April 2009, KEITI was launched. This institute was created through the combined efforts of the Korea Institute of Environmental Science (KIEST) and the Korea Eco-products Institute (KOECO).</td></tr>
<tr><td>Stakeholders</td><td colspan="3">KEITI is a government agency founded in 2009 in accordance with the Development of Environmental Technology and Support for Environmental Industry Act. An organisation chart of the agency is available at: http://www.edp.or.kr/carbon/english/about/about_org.asp.</td></tr>
<tr><td colspan="4">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="3">There are 30 PCRs available: home electric refrigerators/freezers, TFT-LCD computer monitors, CRT glass, gasoline for automobile use, tires, toilet paper, PDP TV, automobile air filters, internal optical disk drive units for PC, microwave ovens, ethylene-propylene rubber, air-conditioners, drum washing machines for home use, laundry detergent, dishwashing detergent, video players/recorders, laser printers, mobile phones, natural gas, TFT-LCD modules, flat glass for TFT-LCD, digital cameras, printed circuit boards, felt sheets, copper and copper alloy, tap water, packaged tofu, semiconductor wafers, electric power systems, and tilting trains.</td></tr>
<tr><td>Scope of the assessment</td><td colspan="3">Korean EDP accounts for environmental impacts along the entire life cycle.</td></tr>
<tr><td>Geographical scope</td><td colspan="3">Korea</td></tr>
<tr><td colspan="4">Companies using the scheme</td></tr>
<tr><td colspan="4">Examples of companies using the scheme include Samsung Techwin Co., Ltd., Kumho Tires Co., INC., LG Electronics Inc., TSST Korea Corporation.</td></tr>
<tr><td colspan="4">Link with other schemes, link to ISO standards or other standards</td></tr>
</table>

Korean Environmental Declaration of Products (EDP)
The Korean EDP is a type III Environmental Declaration. ISO 14025 is the standard that applies to this type of environmental declaration.
Public information
The certification process is available at: http://www.edp.or.kr/edp/english/process/process_intro.asp. The general requirements for certification are available at: http://www.edp.or.kr/edp/english/process/general_criteria_2011.pdf. Product category rules can be downloaded from http://www.edp.or.kr/edp/english/process/process_list.asp. The EDP report of each Environmental Declaration of Products can be accessed from http://www.edp.or.kr/edp/english/list/list.asp. For example, the EDP report of the SOLUS Comfort Kumho Tire is available at: http://www.edp.or.kr/edp/english/list/list_view.asp?Num=30&OkNum=EMC-2004-004&page=1&search_colume=&search_text=.
General features of the compliance system
The certification process is available at: http://www.edp.or.kr/edp/english/process/process_intro.asp. ▪ To apply for certification, an applicant must submit a certification application, an LCA performance report, an EDP result of the product group in accordance with the EDP guidelines, and the supporting documentary evidence. ▪ KEITI conducts examination activities. They include document and site examinations. These examinations are performed by an examination team composed of two LCA certification examiners and one environment or process examiner. The examination team writes up examination result reports. This team then submits an overall examination report (based on the result reports) to KEITI certification examination board. ▪ KEITI certification examination board, which is composed of the LCA expert, the eco-labelling expert, and the product expert, composes a written opinion about examination based on the overall examination report. ▪ Then, if the certification examination board is positive, KEITI issues the EDP certificate. ▪ Post-certification activities should be carried out at least once a year. These activities include assurance of the proper usage of EDP and its format as well as investigation of illegal usage of EDP.
References
▪ Official website: http://www.edp.or.kr/ ▪ ISO 14025:2006 – Environmental labels and declarations – Type III environmental declarations – Principles and procedures

Label LUCIE

<table>
<tr><th colspan="3">Label LUCIE</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The "Label LUCIE" is a guarantee that a certified company complies with the LUCIE Corporate Social Responsibility (CSR) commitments. It also helps companies progress in this area thanks to a continuous improvement approach. It is based on 7 commitments and 28 principles for actions that cover all aspects of CSR and derive from the ISO26000 seven core subjects. Third parties perform the evaluations and an independent committee awards the label.
Official website: http://www.labellucie.com/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Seal of approval</td><td rowspan="3">The purpose of the label is to assess, develop and promote the CSR actions and commitments of organisations.
In line with the ISO 26000 standard, the label demonstrates the corporate commitment in terms of consumer protection, environmental protection, best practice in business, work conditions, human rights, contribution to local development and organisation governance.</td></tr>
<tr><td>Thematic area</td><td>▪ Social (Corporate Social Responsibility)</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td><td>The Label LUCIE is a chargeable service proposed by the LUCIE Agency.</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td><td>The owner of this scheme is the LUCIE Agency. It is a private entity.
The LUCIE Agency has several shareholders including Qualité France Association (majority shareholder), Goodwill Management and AFNOR Certification.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>Vigeo and AFNOR Certification conduct third-party evaluations.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>Some of the principles listed in the LUCIE standard relate to aspects and stakeholders beyond the scope of the company such as suppliers certification, realisation of a consumer survey, encouraging fairtrade, recruitment only based on skills, insurance that suppliers do not employ children. The firm activities have indirect effects on these aspects that can be considered as invisible impacts.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">The "label LUCIE" was launched in 2008 and is currently in use. It was created by Qualité France Association, a federation of consumer associations that creates quality labels and certificates since 1947. The LUCIE standards were initially elaborated with Vigeo, a European leader in the field of sustainability assessment for companies.
In 2011, a partnership agreement was signed between the LUCIE Agency, Vigeo and AFNOR Certification. LUCIE Agency's estimations of the number of companies that will receive the "Label LUCIE" are as follows: 70 in 2012, 165 in 2013, 456 in 2014, 730 in 2015, 873 in 2016 and 944 in 2017.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The key stakeholders involved in this scheme are:
▪ The LUCIE Agency shareholders
▪ Vigeo and AFNOR Certification, which conduct third-party evaluations
▪ The "awarding committee" (Comité de labellisation), which is composed of independent CSR experts and representatives from CSR associations. The committee decides whether an organisation can receive the LUCIE label.
▪ Members of the "LUCIE community", i.e. organisations that have been awarded with the label or are applying for it.</td></tr>
</table>

Label LUCIE	
Scope	
Targeted products/sectors	Any company in any sector
Scope of the assessment	Through its principles for actions, the label covers all the value chain: suppliers, manufacturers, employees and customers.
Geographical scope	France
Companies using the scheme	
To date, more than 30 companies have been awarded with the "Label LUCIE". About 30 companies are currently in the application process. Examples of label bearers include Banque populaire, Schneider Electric, etc. Examples of applicants include Ferrero, Véolia Propreté, Selectour.	
Link with other schemes, link to ISO standards or other standards	
The "Label LUCIE" builds on the ISO 26 000 standards. The LUCIE Agency underlines the compatibility of the "Label LUCIE" with ISO 26000 as well as with the Article 225 of the French "Grenelle II" law published in 2012 that states that all companies with more than 500 employees must report and verify their environmental and social data.	
Public information	
The list of commitments and principles of actions is available at: http://www.labellucie.com/images/stories/Tableau_rsum_rfrentiel_LUCIE_V3_120328BP.pdf The preliminary self-assessment tool is available at: http://www.labellucie.com/telechargements/163-auto-evaluation-lucie The list of label bearers and applicants is available at: http://www.labellucie.com/la-communaute-lucie/les-membres	
General features of the compliance system	
The ISO 26000 standard published in 2010 provides guidelines regarding social responsibility but no requirements. This standard is not a management system standard and thus it is not intended or appropriate for certification purposes. In this context, the "Label LUCIE" was created to prove the real commitment of the companies based on principles of actions derived from ISO 26000 recommendations. First, the applying company needs to perform an internal assessment. Then, AFNOR Certification or Vigeo performs an initial audit and draws up an assessment report. Based on this, the company proposes a progress plan with specific objectives. Finally, an independent awarding committee decides whether the LUCIE Label can be awarded based on their analysis of the results of the initial audit and the progress plan. The label is valid for two years. Every 18 months, AFNOR certification or Vigeo performs an evaluation of the results and progress.	
References	
▪ Label LUCIE website: http://www.labellucie.com/ ▪ Label LUCIE, 2012. Référentiel d'évaluation RSE du label LUCIE – 7 engagements et 28 principes d'actions – Version 1 - 28/03/2012	

Marine Stewardship Council (MSC)

Marine Stewardship Council (MSC)		
Brief presentation		
The Marine Stewardship Council (MSC) fishery certification program and seafood ecolabel recognise and reward sustainable fishing. There are two main types of certification: fishery certification and chain of custody certification, which relate respectively to production and subsequent progress of fish products through the supply chain. Fisheries wishing to become MSC-certified appoint an independent accredited certifier to assess their fisheries against the MSC Fishery standard. Similarly, companies in the supply chain wishing to sell MSC-certified product need to be assessed by certifiers against the MSC chain of custody standard. The scheme is set up to ensure that MSC-certified seafood only comes from MSC-certified sustainable fisheries that have been independently assessed and certified as ecologically sustainable and fully traceable. It enables consumers to know that a product with the MSC-label has not contributed to the environmental problem of overfishing. **Official website:** http://www.msc.org/		
Key features		
Nature of the scheme	▪ Seal of approval	The Marine Stewardship Council (MSC) ecolabel provides assurance to buyers that the MSC-certified fish or seafood they buy comes from a well-managed and sustainable source. MSC-certified products can be traced back through every step of the supply chain to the fishery that caught it.
Thematic area	▪ Sustainable resource use (wild fish)	
Regulatory framework	☒ Product ☐ Organisation	This scheme is product-oriented scheme because in the end, the objective is to affix the MSC trademark on a product.
Type of scheme	☒ Voluntary ☐ Mandatory	Although this scheme is voluntary, there is an increasing demand for MSC-certified products and an increasing market access of these products in particular in Europe and in the United States. Companies like McDonald's Europe and Wal-Mart are now demanding MSC-certified fish.
Scheme owner	☐ Public ☒ Private	The Marine Stewardship Council is an international non-profit organisation. It is governed by a Board of Trustees that receives advice from the Technical Advisory Board (TAB) and Stakeholder Council. Trustees and TAB members chosen for their skills are nominated in a personal capacity, not as representatives of their organisations. The Stakeholder Council has two chambers reflecting private and public interests. The Commercial Chamber is composed of actors from the catch, processing, or retail sectors (e.g. Mc Donald's Europe). The Public Interest Chamber is composed of representatives from the scientific or marine conservation community (e.g. WWF). In addition to the three governance bodies, committees and working groups are set up to address specific regional or topical issues.
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	MSC certificates are awarded by independent certification bodies, which are accredited by the ASI (Accreditation Services International).
	Invisible characteristics Yes ☒ No ☐	Invisible characteristics of FSC products relate to the concept of sustainable fishery, i.e. an effective management system that prevents over-fishing and depletion of the exploited populations and allows for the maintenance of the ecosystems. The sustainable origin of a fish product cannot be measured or tested on the product itself and can thus be considered as an embedded characteristic.

Marine Stewardship Council (MSC)	
Context and scheme status	
History and future developments	The Marine Stewardship Council was set up in 1997 to offer a solution to the global problem of overfishing. It was initiated by the WWF and Unilever, a multinational corporation that was a major player in the seafood industry[125] at that time. The MSC became completely independent in 1999. The number of certified fisheries and labelled products grew rather slowly at the beginning but has been accelerating in recent years. In 2007, there were 22 certified fisheries, about 400 companies trading MSC-certified seafood and fewer than 500 labelled products available in the global market place. Five years later, there were 147 certified fisheries (with another 128 under assessment), more than 2,000 seafood businesses certified and almost 15,000 products available in the global market place.
Stakeholders	The MSC sets and maintains the MSC standards. This includes the MSC fishery standard and the chain of custody standard as well as the MSC Certification Requirements (i.e. the methodology on how to certify fisheries). The MSC also develops guidance to the MSC standard that provides discussion about the background and intent of some requirements, and provides explanatory text and examples. The MSC also provides advice to certifiers, clients and stakeholders about the assessment process and requirements. Accreditation Services International (ASI) accredits third-party certifiers to conduct MSC assessments and monitors certifiers compliance with the MSC standard and certification requirements. Certifiers issue the fishery certificate and conduct surveillance audits and evaluations during the life of the fishery certificate. In particular, the certifier's assessment team will evaluate fisheries against the MSC standard based on information provided by the client, management agencies and stakeholder groups. The assessment team is not obliged to conduct new research in order to reach a judgment. The team uses existing information to reach a precautionary conclusion.
Scope	
Targeted products/sectors	Fisheries and fishing (wild capture fisheries only) The MSC certification is open to fisheries of any size, type and location.
Scope of the assessment	The fisheries assessment relies on three principles: ▪ Sustainable fish stocks (no overexploitation of the resources) ▪ Minimising environmental impact (i.e. maintaining the ecosystem on which the fishery depends) ▪ Effective management (compliance with laws and existence of a management system to maintain sustainability) MSC Principles and Criteria in the fishery standard relate to marine fisheries activities up to but not beyond the point at which the fish are landed. This standard establishes a system for maintaining the chain of custody in the supply chain of products from fisheries certified to the MSC Principles and Criteria for Sustainable Fishing or to other standards as approved by the MSC. It does not cover issues such as food safety or quality. This standard is applicable to all organisations wishing to make a claim about certified products. This standard is for the certification of the process of chain of custody subject to the MSC Certification Requirements.
Geographical scope	International Certified fisheries can be found throughout the world. MSC-labelled products are available across 84 countries.
Companies using the scheme	
The MSC programme is open to all fisheries regardless of size, scale, location and intensity and runs a Developing World Program to ensure equal access to the programme. Nearly 200 fisheries are certified and over 100 are currently undergoing the assessment. Another 40 to 50 fisheries are in confidential pre-assessment.	

[125] Unilever used to be one of the world's largest buyers of frozen fish, with a 25% share of the European and United States markets but this came to an end when the firm sold its seafood business in 2011.

Marine Stewardship Council (MSC)
Link with other schemes, link to ISO standards or other standards
The programme is consistent with The Code of Conduct for Responsible Fishing (UN FAO) and with the Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (UN FAO). MSC is a member of the ISEAL Alliance (International sustainability standards organisation) which develops guidance and facilitates coordinated efforts to scale up its members' social and environmental impacts. The MSC Certification Requirements make reference to several normative documents, in particular to ISO 65 and to ISO 19011:2012.
Public information
All MSC scheme documents (standard, guidance, requirements for certifiers, forms) are available at: http://www.msc.org/documents/scheme-documents The list of accredited certification bodies is available at: http://www.accreditation-services.com/archives/standards/msc
General features of the compliance system
Fisheries wishing to become MSC-certified appoint an independent, accredited certifier to assess their fisheries against the MSC standard. To ensure complete independence of the Marine Stewardship Council from the certification process, Accreditation Services International (ASI) is the independent organisation that accredits certifiers to conduct MSC assessments. Only accredited certifiers can carry out MSC assessments. When assessing fisheries, certifiers use the MSC certification requirements, which establish how to assess fisheries against the MSC standard. General requirements for all certifiers set out the steps that accredited certifiers must take to assess a fishery against the MSC standards for sustainable fishing. These requirements include the steps in the assessment process as well as the assessment tree used to score fisheries. When a fishery meets the MSC requirements for sustainable fishing, a certificate is awarded. It is valid for five years. During this period, the performance of the fishery is to be reviewed at least once a year to check that it continues to meet the MSC standard requirements. After five years, a full re-assessment of the fishery is required. Certification does not stop with the fishery. The traceability standard for the entire supply chain (Chain of Custody) guarantees any product bearing the MSC ecolabel comes from a fishery that meets the MSC Standard requirements. Indeed, businesses that wish to display the MSC ecolabel on their products need to ensure the traceability of the product back to a certified fishery. Each company in the supply chain therefore needs to undergo a Chain of Custody audit. The MSC does not receive any payment for assessments or certifications. The MSC only receives payment when organisations choose to use the MSC ecolabel on their products. Fees charged by certifiers are generally kept confidential between the client and the certifier and are determined on a case-by-case basis depending upon each stage of the fishery assessment process.
References
▪ Marine Stewardship Council, 2010. MSC Fishery Standard – Principles and Criteria for Sustainable Fishing – Version 1.1 – 1st May 2010 ▪ Marine Stewardship Council, 2011. MSC Chain of Custody Standard – Version 3.0 – 15 August 2011 ▪ Marine Stewardship Council, 2011. Get Certified! –Fisheries – A practical guide to the Marine Stewardship Council's fishery certification process ▪ Marine Stewardship Council, 2011. Get Certified! – Chain of Custody – A practical guide to the Marine Stewardship Council's Chain of Custody certification process ▪ Marine Stewardship Council, 2012. Marine Stewardship Council Annual Report 2011/12 ▪ Marine Stewardship Council, 2013. MSC Certification Requirements – Version 1.3, 14 January 2013 ▪ ISO/IEC Guide 65: 1996, General requirements for bodies operating product certification systems ▪ ISO 19011:2012 : Guidelines for quality and/or environmental and/or environmental management system auditing

NF Mark/NF service

<table>
<tr><th colspan="3">NF Mark/NF service</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The brands NF and NF Service are labels awarded by AFNOR Certification that guarantee the quality and the safety of industrial products, consumer goods or services according to specific NF standards. The effectiveness of the service and the quality management system is checked through inspections and auditing by a authorised body. For products, tests are also performed. Regular monitoring is performed in order to ensure customers of the continuing compliance with the requirements of the NF mark.
The NF mark is valid three years. The NF Service mark is valid one year and then it is reawarded for three years.
Official website: http://www.marque-nf.com/</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Conformity mark</td><td rowspan="4">The NF mark is a voluntary differentiation label awarded by AFNOR Certification that guarantees the quality and the safety of industrial products, consumer goods or services according to the specific NF rules.</td></tr>
<tr><td>Thematic area</td><td>▪ Quality and safety</td></tr>
<tr><td>Scope of the scheme</td><td>☒Product
☐Organisation</td></tr>
<tr><td>Regulatory framework</td><td>☒ Voluntary
☐ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☐ Public
☒ Private</td><td>The AFNOR group owns the NF mark and NF Service mark. AFNOR group was created in 2004 from the merger of the AFNOR association (French Association of Normalisation) and the AFAQ association (French Association for quality assurance).
AFNOR Certification is one of the four parts of AFNOR group. AFNOR has granted AFNOR Certification, an operating license for the NF mark. AFNOR Certification manages the NF certification system, which defines the governance rules and operating procedures for the NF and NF Service mark.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>The compliance system is similar for products and services. For both, the quality system is assessed. The quality and safety of the products and service are verified through physical tests for products and immaterial test for services.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>The aspects certified can be invisible. For NF Mark, it depends on the product category. For example for NF Childhood, the quality plan, the purchase process, etc. are also verified.
Conversely, for fire extinguisher, it is mostly measurable characteristics.
For services, items such as the quality system, the commercial process and the satisfaction are verified.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">The NF mark was created in 1947 to satisfy a consumer demand and quickly became a tool for differentiation between products and for the promotion of normalization experts. The NF service mark was created in 1994.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">AFNOR Certification awards the mark. In the case of Services, AFNOR Certification can delegate the certification process.
AFNOR Certification relies on three types of organisations which participate in the certifications processes and form part of the Réseau NF (NF network):
▪ Authorised bodies, in charge of the certification process which results in the awarding of the NF mark. They are accredited by the COFRAC (the French Committee of accreditation)
▪ Technical secretariats, to which some parts of the certification process are subcontracted
▪ Testing and analysis laboratories and specialist inspection and auditing organisations, specialised in specific areas
AFNOR Certification, and some organisations that are members of the NF network, are accredited by the COFRAC for certification activities. The extent of these accreditations may be communicated on request addressed to the organisations.</td></tr>
</table>

NF Mark/NF service	
Scope	
Targeted products/sectors	For NF mark: plugs, kitchen furniture, bin bags, lounge furniture, chimney flues, heating appliances, valves and fittings, sanitary appliances, toothbrushes, bathroom furniture, floor tiles, DIY equipment, paint, wall coverings, barbecues, road markings, road direction signs, school, sports and leisure equipment, fire detectors and fire doors, private moving services and furniture storage, golf course reception services, tourist office reception services, motorbike anti-theft devices, medical equipment, passenger transport services and even houses. For NF Service mark: furniture removal and storage, repair-towing of lightweight vehicles services specifications, professional training, service of interurban transport of passengers, tourist information centres, private prevention and security services, business incubation services, transport services to airports, Installation and maintenance of extinguishers, urban passenger transport, organisers of language study holidays, services related to passenger transport, school transport, services for resident persons, services related to works (undergoing revision), paper document archiving and outsourced management, customer relations, recruitment consulting, water sports - trading and maintenance, water sports: river and maritime rental , direct selling, setting-up and maintenance of intrusion detection and video-surveillance systems, vocational rehabilitation centres, on-demand transport, reception service providers, residential homes for elderly people, funeral services: organisation of funeral ceremonies, school catering, horizontal road marking services, International high-speed rail transportation with reservation.
Scope of the assessment	The NF mark verification includes product testing and audits/inspections of manufacturing sites. For NF Service both service delivery and client satisfaction are verified.
Geographical scope	It has been designed for the French market but it is now international in the sense that the mark is visible on products sold outside France.
Companies using the scheme	
5400 companies are labelled by NF mark or Services. Example of certified companies for NF mark: Seb, Fagor, Téfal. Example of certified companies for NF Service mark Veolia transport Nancy, SNCF Transilien, Euro Disney Associées SCA, Nacel séjours linguistiques, STS séjours linguistiques	
Link with other schemes, link to ISO standards or other standards	
In addition to criteria specific to the NF certification (as defined in NF Certification Guidelines), the product has to comply with the national, European and international regulatory documents concerning it, such as technical standards or specifications.	
Public information	
All the NF general rules are available on the website www.marque-nf.com. Standards specific to a product or service category can be bought on the AFNOR website. European and international regulatory documents related to the category are listed (international standards (ISO), EU directives, etc.). Example for toys: http://www.marque-nf.com/appli.asp?lang=English&NumAppli=NF315. Example for growing media: http://www.marque-nf.com/appli.asp?NumAppli=NF142&Lang=English Examples for organisers of language study holidays : http://www.marque-nf.com/appli.asp?NumAppli=NF295&Lang=English Example for Urban passenger transport: http://www.marque-nf.com/appli.asp?NumAppli=NF286&Lang=English" The list of the holders of the NF mark for each category is also available on the NF website.	
General features of the compliance system	
▪ **Request –** The company contacts AFNOR Certification to request for certification and provides the required documentation on its activity. ▪ **Test (for NF mark only) –** The manufacturer performs tests on its products. ▪ **Audit –** Once the auditor had analyzed the documentation (and the results of the testing), he performs an on-site audit of the quality system. For service, the implementation and satisfaction regarding the service is also assessed. At the end of the audit, the auditor writes a report of his conclusions. ▪ **Certification –** Based on all the results, the corresponding NF certificate is issued. The NF mark is valid for three years. The NF Service mark is valid one year and then renewed for three years. The manufacturer must place the NF mark on the products or packages and the NF Service mark in all communication media. ▪ **Monitoring –** Regular monitoring is performed in order to check, and therefore assure customers of the continuing compliance of the products and quality organisation with the requirements of the mark.	

NF Mark/NF service
References
▪ NF mark and NF Service mark official website: http://www.marque-nf.com/ ▪ AFNOR official website: http://www.afnor.org/ ▪ AFNOR, 2006. General rules of the NF mark, Version 23-04-2012 ▪ AFNOR, 2006. General rules of the NF Service mark, Version 03-02-2011

Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC

<table>
<tr><th colspan="3">Renewable Energy Directive – Sustainability criteria for biofuels in Directive 2009/28/EC</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">The EU Renewable Energy Directive (RED) establishes sustainability criteria for biofuels. Criteria apply since December 2010. Currently, two ways to show compliance with sustainability criteria can be used; either through a Member State's national system or through EU or Member State approved certification schemes. All biofuel producers need to show compliance with the sustainability criteria in order to benefit from public support and for the biofuel to count towards the targets set in the Directive. The Directive regulates an entire sector since biofuel producers are required to collect information on the entire life cycle. This directive may generate spill-overs to other sectors (e.g. food producers).
Official website: http://ec.europa.eu/energy/renewables/biofuels/sustainability_criteria_en.htm</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Sustainability criteria</td><td rowspan="2">The Regulation requires the fulfilment of minimum sustainability criteria (RED articles 17, 18 and 19). These criteria apply since December 2010. Three ways to show compliance with sustainability criteria exist: National systems; Voluntary schemes; and Bilateral and multilateral agreements concluded by the EU with third countries.</td></tr>
<tr><td>Thematic area</td><td>▪ Sustainable resource use (biofuels)</td></tr>
<tr><td>Scope of the scheme</td><td>☒ Product
☐ Organisation</td><td rowspan="2">This scheme is a mandatory policy of the European Union establishing sustainability criteria for biofuel production.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>The owner of this scheme is the EU, i.e. public authorities.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☒ No ☐</td><td>A compliance system exists but its full implementation is not yet completed.
The compliance system as such is set out in the RED and accompanying legislation/guidance. Implementation of the compliance system is not complete in all Member States and voluntary certification schemes as a means of implementing the system are still being developed and recognised by the Commission.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>Invisible impacts are partly taken into account. Some impacts related to biofuel production are addressed (e.g. direct land use change, co-products generation); others remain unaddressed (indirect land use change - ILUC, water, soil, and social impacts).</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">This scheme was initiated by the EU. It was first implemented in 2010. It is currently in use but under development as well. In 2003, the Directive 2003/30/EC set the objective of a 5.75% share of biofuel energy in the transport sector. In 2009, the Renewable Energy Directive 1009/28/EC set the objective of a 10% share of renewable energy in the transport sector. As it became increasingly clear that biofuels can have considerable negative environmental impacts, the Commission included sustainability criteria in the Renewable Energy Directive. A proposal to amend the Directive to take into account ILUC has been made. Other sustainability issues under monitoring by the Commission are impacts on soil, water use (both quantity and quality), food security, etc. No date regarding when the review is to be undertaken has been communicated. The RED states that a review of the implementation of the Directive should take place in 2021 but it does not explicitly state that the review should include a review of compliance mechanisms.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">Stakeholders include actors along the biofuel supply chain (farmers growing crops for biofuel production, raw material collectors or trading companies, biofuel producers, fuel suppliers), NGOs and academic, independent auditors, national government bodies or agencies responsible for collecting information on sustainability at the Member State level.</td></tr>
<tr><td colspan="3">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="2">Biofuel production</td></tr>
</table>

Renewable Energy Directive – Sustainability criteria for biofuels in Directive 2009/28/EC	
Scope of the assessment	Production phase
Geographical scope	Biofuels sold in EU, wherever they are produced

Companies using the scheme

ISCC (International Sustainability & Carbon Certification) System has been approved by the German Authority BLE as the first Certification System for sustainable Biomass and Biofuels according to the German Biokraftstoff-Nachhaltigkeitsverordnung. Companies certified to the German ISCC system include Cargill NV, Amaggi Exportacao e Importacao Ltda and Elektro Guggenmos.

Link with other schemes, link to ISO standards or other standards

The RED Directive 2009/28/EC makes reference to the placing on the market of higher blends of biodiesel in diesel than those envisaged by standard EN590/2004 (describing the physical properties that all automotive diesel fuel must meet if it is to be sold in the European Union, Croatia, Iceland, Norway and Switzerland). It also makes reference to Annex II of the Council Regulation (EC) No 73/2009 of 19 January 2009. This Annex establishes common rules for direct support schemes for farmers under the Common Agricultural Policy and certain support schemes for farmers in relation to the use of agricultural raw materials cultivated in the EU and used for the production of biofuels and bioliquids. International standards developed by CEN (the European Committee for Standardization) and ISO are mentioned as well. CEN standards on biomass sustainability criteria have been developed: EN 16214-1 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 1: Terminology; EN 16214-3 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 3: Biodiversity and environmental aspects related to nature protection purposes; and EN 16214-4 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis.

Public information

Member States must report their compliance with the sustainability criteria to the Commission. A summary of this information will be published by the Commission. Publicly available information about sustainability issues (e.g. GHG savings) varies from one Member State to another. The Commission's first progress report on meeting the RED targets that includes an assessment of biofuel sustainability issues and Member States implementation of the sustainability scheme was published in March 2013: http://ec.europa.eu/energy/renewables/reports/reports_en.htm.

A list of the companies that are certified to the German ISCC system is available at: http://www.iscc-system.org/en/certificate-holders/valid-certificates/

General features of the compliance system

The RED sets out three ways to ensure compliance, and these are still under development at the national level. Only the first two ways are currently operational:

- National systems (Economic operators directly submit information to member states authorities (Art 18.3). In some Member States' national systems, RED compliance is linked to requirements under the Common Agricultural Policy (CAP) and national nature protection legislation, or to land zoning based on national inventories of RED-compliant and non-RED-compliant areas).
- Voluntary schemes recognised by the Commission (Art 18.4) or Member State-recognised national voluntary schemes;
- Bilateral and multilateral agreements concluded by the EU with third countries (The Commission may decide that those agreements demonstrate that biofuels and bioliquids produced from raw materials cultivated in those countries comply with the RED requirements (Art 18.4)).

References

- European Parliament and Council of the EU, 2009. Renewable Energy Directive 2009/28/EC.
- Council of the EU, 2009. Council Regulation (EC) No 73/2009 of 19 January 2009
- CEN. EN 16214-1 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 1: Terminology
- CEN. EN 16214-3 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 3: Biodiversity and environmental aspects related to nature protection purposes
- CEN. EN 16214-4 Sustainably produced biomass for energy applications - Principles, criteria, indicators and verifiers for biofuels and bioliquids - Part 4: Calculation methods of the greenhouse gas emission balance using a life cycle analysis.

Roundtable on Sustainable Palm Oil (RSPO)

Roundtable on Sustainable Palm Oil (RSPO)		
Brief presentation		
The objective of the Roundtable on Sustainable Palm Oil (RSPO) is to promote the growth and use of sustainable oil palm products. The RSPO Principles and Criteria for Sustainable Palm Oil Production are the global guidelines for producing palm oil sustainably. The standards address the legal, economic, environmental and social requirements of producing sustainable palm oil. National interpretations of the international indicators and guidance are developed. Members can use the RSPO trademark in communication on or about products that contain palm-derived ingredients sourced in compliance with RSPO Principles and Criteria. No public claims relating to compliance with the RSPO Principles and Criteria can be made without third-party verification and certification. The third party is a RSPO-approved independent certification body. Growers are assessed for certification once every five years and, if certified, they are assessed for continued compliance annually. After five years, the main assessment is repeated. **Official website:** http://www.rspo.org		
Key features		
Nature of the scheme ▪ Thematic area	▪ Seal of approval ▪ Environmental and social	This initiative is used for external communication. It has been set up to allow consumers to make well-informed choices. The RSPO-trademark signals that the palm oil used in a product bearing this trademark has been produced in accordance with the RSPO requirements.
Scope of the scheme	☒ Product ☐ Organisation	This scheme is a product-oriented scheme because in the end, the objective is to affix the RSPO trademark on a product.
Regulatory framework	☒ Voluntary ☐ Mandatory	The owner of this voluntary scheme is the RSPO. It is an NGO.
Scheme owner	☐ Public ☒ Private	
Compliance system	**Existence of a compliance system** Yes ☒ No ☐	The compliance system is based on a third-party verification.
	Invisible characteristics Yes ☒ No ☐	Some embedded impacts are taken into account. For example, the Principles and Criteria state that agrochemicals must be used in a way that does not endanger health or the environment. The quantity of agrochemicals used to get palm oil cannot be measured directly on a product. Therefore, it is an embedded impact. Embedded characteristics of RSPO-certified palm oil also include conservation of biodiversity, responsible consideration of employees, long-term economic and financial viability, etc.
Context and scheme status		
History and future developments	In 2001, WWF started exploring the possibilities for a Roundtable on Sustainable Palm Oil. In 2002, it resulted in an informal co-operation among WWF, Aarhus United UK Ltd, Migros, the Malaysian Palm Oil Association and Unilever. At a meeting in December 2002, these organisations constituted themselves as an Organizing Committee to organise the first Roundtable meeting and to prepare the foundation for the organisational and governance structure for the formation of the RSPO. The "Roundtable on Sustainable Palm Oil" was formally established under Article 60 of the Swiss Civil Code with a governance structure that ensures fair representation of all stakeholders throughout the entire supply chain.	
Stakeholders	RSPO is a membership organisation with a general assembly. Companies wishing to join the Roundtable agree to obey the RSPO Code of Conduct. The RSPO secretariat delivers all development and promotion activities, with ordinary members voting on proposed developments. Ordinary membership is open to oil palm growers, palm oil processors and traders, consumer goods manufacturers, retailers, banks and investors, environmental or nature conservation NGOs, and social or development NGOs.	
Scope		
Targeted products/sectors	Palm oil industry	

Roundtable on Sustainable Palm Oil (RSPO)	
Scope of the assessment	For products, the scope of the assessment is the life cycle. Management practices and social responsibility are also part of the scope. Indeed, the assessment includes the verification of the fulfilment of environmental, social and economic requirements.
Geographical scope	International
Companies using the scheme	
There are 829 Ordinary Members, 100 Affiliate Members and286 Supply Chain Affiliates. Examples of companies using this scheme include Boots UK, Carrefour, Coop Sweden, Delhaize, Dutch Food Retail Association, IKEA, M&S, McDonald's, REWE. Certified companies produce about 40% of the world's palm oil and are buyers of more than 20%.	
Link with other schemes, link to ISO standards or other standards	
RSPO uses a mechanism for approving certification bodies that is based on accreditation against ISO Guide 65 or ISO Guide 66. The generic accreditation is also supplemented by a set of specific RSPO certification process requirements. The accreditation authority must be operating in accordance with the requirements of ISO 17011. This must be demonstrated either as a signatory to the appropriate International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) or through full membership of the International Social and Environmental Accreditation and Labeling Alliance (ISEAL).	
Public information	
The RSPO website provides public information. Key documents are mostly promotional. Little analytical documents appear to have been prepared. Certification information is made public at: http://www.rspo.org/en/how_to_be_rspo_certified	
General features of the compliance system	
No public claims relating to compliance with the RSPO principles and criteria can be made without third-party verification and certification. The third party is a RSPO-approved independent certification body. Growers are assessed for certification once every five years and, if certified, they are assessed for continued compliance annually. After five years, the main assessment is repeated. Details are provided in the RSPO Certification Systems document. The objective of these detailed requirements is to ensure that RSPO assessments are carried out with objectivity and consistency, together with the required levels of technical rigour and stakeholder credibility. RSPO producer members interested in being RSPO-certified as sustainable palm oil producers need to engage a RSPO-approved certification body for such certification. The unit of certification is the unit of palm oil production, the palm oil mill and its supply base. To certify the mill, the supply of all its oil palm fruits must be certified; this would include its own estates (managed directly, ownership unimportant) and those of its suppliers (smallholders and other estates), if any.	
References	
▪ RSPO official website: http://www.rspo.org ▪ ISO/IEC Guide 65: 1996 – General requirements for bodies operating product certification systems ▪ ISO/IEC Guide 66: 1999 – General requirements for bodies operating assessment and certification/registration of environmental management systems (EMS) ▪ ISO/IEC 17011:2004 – Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies ▪ RSPO, 2007. RSPO Principles and Criteria for Sustainable Palm Oil Production ▪ RSPO, 2007 (revised in 2011). RSPO Certification Systems ▪ RSPO, 2012. RSPO Code of Conduct for Members of The Roundtable on Sustainable Palm Oil	

UK Mandatory Carbon Reporting – Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013

<table>
<tr><th colspan="3">UK Mandatory Carbon Reporting –
Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013</th></tr>
<tr><td colspan="3">Brief presentation</td></tr>
<tr><td colspan="3">This mandatory reporting is not yet in place. Some aspects of the regulation seem rather flexible such as the choice of the accounting methodology or tool. There is no mention in available literature of the inclusion of a compliance system in the legislation.
Official website: https://www.gov.uk/government/consultations/consultation-on-greenhouse-gas-ghg-reporting-draft-regulations</td></tr>
<tr><td colspan="3">Key features</td></tr>
<tr><td>Nature of the scheme</td><td>▪ Carbon reporting</td><td rowspan="2">Emissions should be reported annually in a Director's report.
The UK Government aims to reduce the UK's GHG emissions by at least 80% (from the 1990 baseline) by 2050 (Climate Change Act 2008). Carbon reporting is the first essential step for companies to make reductions in GHG emissions and thus to contribute to achieving the UK Government's climate change objectives.</td></tr>
<tr><td>Thematic area</td><td>▪ Environment (GHG emissions)</td></tr>
<tr><td>Scope of the scheme</td><td>☐ Product
☒ Organisation</td><td rowspan="2">Companies required to report are those listed on the Main Market of the London Stock Exchange.</td></tr>
<tr><td>Regulatory framework</td><td>☐ Voluntary
☒ Mandatory</td></tr>
<tr><td>Scheme owner</td><td>☒ Public
☐ Private</td><td>This scheme is a UK Government policy.</td></tr>
<tr><td rowspan="2">Compliance system</td><td>Existence of a compliance system
Yes ☐ No ☒</td><td>There is no verification requirement for GHG emissions reported by companies.</td></tr>
<tr><td>Invisible characteristics
Yes ☒ No ☐</td><td>Reporting is required for some indirect impacts e.g. indirect emissions from purchased energy.</td></tr>
<tr><td colspan="3">Context and scheme status</td></tr>
<tr><td>History and future developments</td><td colspan="2">This scheme is a reporting initiative that is part of the government's efforts to meet political targets of cutting carbon emissions to 80% of 1990 levels by 2050. By measuring and reporting GHG emissions, companies can begin to set targets and to put in place carbon management initiatives to reduce emissions in the future. According to Defra, reporting could contribute to saving four million tons of CO_2 emissions by 2021.
Originally, this scheme should have been introduced in April 2013. It is still under development.
The regulations will be reviewed in 2015 to decide whether to extend the approach to all large companies from 2016.</td></tr>
<tr><td>Stakeholders</td><td colspan="2">The Department for Environment, Food and Rural Affairs (Defra) is the body responsible for the public consultation process on the draft regulation. The consultation was carried out in 2012 and is currently under review.</td></tr>
<tr><td colspan="3">Scope</td></tr>
<tr><td>Targeted products/sectors</td><td colspan="2">Companies listed on the London Stock Exchange (approximately 1,600 companies)</td></tr>
<tr><td>Scope of the assessment</td><td colspan="2">The scope of the mandatory reporting is equivalent to scopes 1 and 2 of the GHG Protocol Corporate Standard.</td></tr>
<tr><td>Geographical scope</td><td colspan="2">UK</td></tr>
</table>

UK Mandatory Carbon Reporting – Quoted Companies Greenhouse Gas Emissions (Directors' Reports) Regulations 2013
Companies using the scheme
None The scheme is still under development.
Link with other schemes, link to ISO standards or other standards
The regulation does not require companies to use government guidance but it does require that directors be transparent over which methodology has been used. Defra provides guidance for companies wishing to measure and report on their emissions and annual emissions factors. Recognised standards or frameworks may also be used. Examples given by Defra include the GHG Protocol and ISO 14064-1.
Public information
The Draft regulation and draft regulation consultation document are available at: https://www.gov.uk/government/consultations/consultation-on-greenhouse-gas-ghg-reporting-draft-regulations
General features of the compliance system
There is no verification requirement for GHG emissions reported by companies. However, financial auditors must ensure that statements made in the Director's report are consistent with other aspects of the Annual Report and Accounts.
References
▪ World Resources Institute & World Business Council for Sustainable Development (WRI & WBCSD), 2004. GHG Protocol – A Corporate Accounting and Reporting Standard – Revised edition ▪ ISO 14064-1:2006 – Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals ▪ Houses of Parliament – Parliament Office of Science and Technology – POSTNOTE Number 428 January 2013 – Reporting Greenhouse Gas Emissions ▪ Carbon Trust website – Page on Mandatory Carbon Reporting. Available at: http://www.carbontrust.com/resources/guides/carbon-footprinting-and-reporting/mandatory-carbon-reporting

Annex 3. "Compliance systems" factsheets (14 schemes)

Australian National Greenhouse and Energy Reporting (NGER)

Australian National Greenhouse and Energy Reporting (NGER)	
Key messages	
Nature of the scheme	The Australian National Greenhouse and Energy Reporting (NGER) is a legally enforced reporting. The scheme was created in order to monitor GHG emissions of entities that fall above a certain emissions and energy use threshold. These entities must register and report each year. Data collected through the NGER scheme support Australian policy on climate change and help meet Australian international reporting obligations. They also provide the basis for assessing liability under the carbon pricing mechanism. The latter was established in 2012 and requires the most polluting corporations to report on and pay a price for their carbon pollution. The price is established by the Clean Energy Regulator for the first three years, but starting from the 2015-16 period it will be set by the market. Every year the Clean Energy Regulator publishes a summary of the reported information by registered corporations.

Advantages	Drawbacks
Surveillance – The collected data in case of audit is constituted by documentation regarding activity data but also methods used to evaluate GHG emissions and monitoring. **Intervention of a verifier –** In case of surveillance audit, auditors are registered in a list of "Register of Greenhouse and Energy Auditors". **Validity of the proof of compliance –** The entities must register and report every year. **Flexibility –** The cost of the compliance verification depends on the scope of verification. **Transparency –** The summary of the information reported by registered corporations published every year by the Clean Energy Regulator. Moreover, the initiative publishes all the documentation regarding the standards, the reporting guidelines for estimating emissions, the audit handbook, the registered company, etc. **Traceability –** The documentation is to be kept for five years from the end of the year in which the activity takes place. **Invisible characteristics –** Indirect emissions are verified through the assessment of the methodology and the data implemented. **Consequences of non-compliance/misuse –** Organizations that do not comply with the regulation are subject to sanctions (penalties up to €254,000 (AUS$340,000) for failure to apply for registration, daily fines of up to €12,700 (AUS$17,000) for each day of non-compliance. **Governance –** The initiative is written in law and managed by a public and independent "Clean Energy regulator". **Recognition –** The initiative is known in the whole country.	**Initial assessment –** No systematic "ex-ante" verification (i.e. verification before reporting the emissions to the authorities). Moreover, the scope of verification is limited to the emissions at company level. **Surveillance –** Surveillance audits are only carried out in case of suspected non-compliance **Intervention of a verifier –** If the audit is voluntary, on company's initiative, the employment of a registered auditor is encouraged but not required. **Invisible characteristics –** Only indirect emissions from energy production are taken into account **Flexibility –** The standards, non-compliance consequences are similar to every enterprise, without specific consideration such as the company size. **Transparency –** misuse and complaints are not publicly available.

Australian National Greenhouse and Energy Reporting (NGER)	
Compliance system set-up	
Initial process	The Department of Climate Change and Energy Efficiency, a public body of the Australian government, is responsible for the application of the NGER Act. Corporations should be aware of reporting thresholds. By looking at each threshold, they have to determine their obligations under the NGER Act. If a company meets or exceeds one or more of the thresholds for a reporting year, it must register and report for the first year that the threshold has been reached and then for each year the corporation remains registered. There is no systematic third-party verification "ex-ante" – i.e. before reporting the emissions to the authorities. Corporations can decide to carry out voluntary self-audits, in order to make sure that their report is correct. If they do so they are encouraged to (but not required to) choose an auditor from the Register of Greenhouse and Energy Auditors.
Surveillance	Audits can be carried out when there is a suspected breach of legislation. If this is the case, they are financed by the audited organisation, and verifiers can be appointed by the entity in question, but they must meet the standards established by the NGER. In some cases, the regulator may decide to appoint a specific verifier. In addition, audits can be realised as part of the compliance strategy, and in this case they are paid for by the Clean Energy Regulator. The audits may check the registered corporation's structure, operational control, and facilities, as well as the identification and measurement of emissions sources, energy consumption, and production point. It also checks the accuracy, completeness and validity of reported greenhouse and energy data, including recordkeeping requirements, or more generally, the effectiveness of internal controls associated with data collection and reporting processes that support the collection or calculation of reported emissions and energy data. Corporations that fail to register and report or otherwise comply with obligations under the NGER Act may be liable for penalties of up to €254,000 (AUS$340,000) for failure to apply for registration, and daily fines of up to €12,700 (AUS$17,000) for each day of non-compliance.
Renewal	Not applicable for this scheme as reporting is provided on an annual basis.
Transparency – Availability of information	
Requirements and other information for operators	The National Greenhouse and Energy Reporting Act 2007 (NGER Act 2007) establishes the legislative framework for the NGER scheme. Several legislative instruments sit under the NGER Act, providing greater detail on corporations' obligations. In particular, the National Greenhouse and Energy Reporting Regulations 2008 define the details that allow compliance with the NGER Act. For example, the Regulations specify the information that must be provided in reports under the NGER Act and the way that provisions of the NGER Act must be applied. The public authorities have developed the National Greenhouse and Energy Reporting Guidelines in order to help corporations understand their obligations under the NGER act 2007. Every year, the authorities release technical guidelines presenting the latest methods for estimating emissions for the current reporting year. They provide additional guidance to assist reporters in estimating greenhouse gas emissions for reporting under the NGER system and in general.
Requirements and other information for verifiers	A "National Greenhouse and Energy Reporting Audit Determination Handbook" was published in April 2012, outlining information on the audit process, quality control, conflict of interest and team selection, and on the assurance and verification processes. A "Greenhouse and Energy Auditor Registration Guidelines" document was published in November 2012 targeted to auditors wishing to become registered to the NGER (see section "Control of verifiers").
Registry of compliant products or organisations	The Regulator only publishes data of corporations above a certain threshold, i.e. for reporting year 2010–11 and all subsequent reporting years, corporate groups with scope 1 and scope 2 greenhouse gas emissions combined that are equal to or greater than 50 kilotonnes. The list of registered companies under NGER act is available here: http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/published-information/greenhouse-and-energy-information/Greenhouse-and-Energy-information-2011-2012/Pages/default.aspx
Complaint and fraud reporting	Reporting on frauds is not available on the NGER webpages. The Clean Energy Regulator has an e-mail address for enquiries and complaints: enquiries@cleanenergyregulator.gov.au

Australian National Greenhouse and Energy Reporting (NGER)	
Traceability	
Record keeping requirements	To comply with the NGER Act, corporations above the threshold need to keep detailed records of the GHG and energy related activities of all members of their corporate group. The recommended records include (but are not limited to): ▪ a list of all emissions, energy production and consumption ▪ the activity data used to calculate greenhouse gas emissions for each source, categorised by process and fuel or material type ▪ documentary evidence relating to calculations—for example, receipts, invoices and details of payment methods ▪ documentation of the methods used for greenhouse gas emissions and energy estimations ▪ documents justifying selection of the monitoring methods chosen ▪ documentation of the collection process for activity data for a facility and its sources, and ▪ records supporting business decisions and accuracy, especially for high-risk areas relating to reporting coverage (for example, applying concepts of controlling corporation, corporate group and facility). The monitoring methods used need to be specified in case of use of facility-specific emission factors, together with information such as biomass fractions and oxidisation or conversion factors. The collected data are to be kept for five years from the end of the year in which the activity takes place. They are treated according to the NGER data privacy statement.
Management of invisible characteristics	Regarding indirect impacts, the compliance is verified through documentation. For energy for example, the type of energy, the energy content, the mean of use (combustion or other mean) are required, but also the criteria used to determine the energy amount and content and the methods used to calculate the induced GHG emissions.
Governance	
Process for developing the compliance system	The Clean Energy Regulator is the institution in charge with the administration of the NGER Act. It registers corporations for obligatory reporting, manages the National Greenhouse and Energy Register, receives reports, monitors compliance and enforces external audits, and publishes and manages security of NGER data. Reporting requirements under NGER acts are part of a legislative framework. They are written in the law.
Process for updating the compliance system	The scheme can evolve through amendments made to the law. For instance, amendments to the National Greenhouse and Energy Reporting Regulations 2008 were made in 2012 (National Greenhouse and Energy Reporting Amendment Regulation 2012).
Control of verifiers	Audits for corporations suspected of non-compliance and audits realised as part of the compliance strategy of the Clean Energy Regulator need to be carried out by auditors that are included in the Register of Greenhouse and Energy Auditors. The Register is also available for voluntary self-audits. The register is available at: Reporting/Auditors/How-to-register-as-an-auditor/Auditor-registration-guidelines/Documents/Greenhouse%20and%20Energy%20Auditor%20Registration%20Guidelines.doc In order to be registered greenhouse and energy auditors, applicants need to complete and submit an application form available in the Clean Energy Regulator's webpage). During the application process, applicants need to show relevant knowledge and experience. A guide for auditors, the "Greenhouse and Energy Auditor Registration Guidelines", can be found here:http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/Auditors/How-to-register-as-an-auditor/Auditor-registration-guidelines/Documents/Greenhouse%20and%20Energy%20Auditor%20Registration%20Guidelines.doc

Australian National Greenhouse and Energy Reporting (NGER)
Cost of the compliance system
The cost of compliance system is associated with the standard cost of operational emissions verification, borne by the entity in question. Its cost would vary depending on the complexity of the verification scope, the number of sources to be verified, and the availability of data. The cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving. Additional verification of data may be required in instances where an entity fails to demonstrate that emissions data has been sufficiently monitored. To note that in cases of suspected breach of legislation, audits may be required, paid for by the audited organisation. Audits realised as part of the compliance strategy are paid for by the Clean Energy Regulator.
References
▪ Clean Energy Regulator website http://www.cleanenergyregulator.gov.au/National-Greenhouse-and-Energy-Reporting/Pages/default.aspx ▪ National Greenhouse and Energy Reporting Regulations 2008 ▪ Australian Government – Department of Climate Change, 2008. National Greenhouse and Energy Reporting Guidelines ▪ Australian Government – Department of Climate Change and Energy Efficiency, 2012. National Greenhouse and Energy Reporting System Measurement – Technical Guidelines for the estimation of greenhouse gas emissions by facilities in Australia (applies to the estimations of emissions in the 2012-2013 reporting year). ▪ Australian Government – Clean Energy Regulator, 2012. National Greenhouse and Energy Reporting – Audit Determination Handbook ▪ Australian Government – Clean Energy Regulator, 2012. National Greenhouse and Energy Reporting – Greenhouse and Energy Auditor Registration Guidelines – November 2012

Blue Angel (Blauer Engel)

<table>
<tr><th colspan="3">Blue Angel (Blauer Engel)</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The Blue Angel considers itself as a market conformity instrument of environmental policy designed to distinguish the positive environmental features of products and services on a voluntary basis.
Criteria address the whole product life cycle, from design and production to end-of-life management, as relevant to the specific product group. Impacts vary according to product group, including avoiding some substances/resources and production impact limits.
There are just over 120 product groups in categories such as office, renovation and construction, garden, household and living, electronic devices, energy and heating, and mobility.</td></tr>
<tr><td colspan="2">Advantages</td><td>Drawbacks</td></tr>
<tr><td colspan="2">Intervention of a verifier – The documentation is verified by an independent body, the RAL gGmbH.
Validity of the proof of compliance – The legal right to use the Blue Angel label is given for a determined period (in general four years, but this depends on the product category).
Flexibility – Standards are specific to product groups (120), the duration of the label validity and the verification process depend on the product category. There is also a specific verification process for SMEs.
Invisible characteristics – Some requirements can relate to invisible impacts. They are verified through documentation such as invoices.
Governance – The Blue Angel label criteria, developed by the German Federal Environment Agency (UBA), are approved by an Environmental Label Jury that is an independent decision-making body composed of representatives from various backgrounds.
Recognition – Although voluntary, the Blue Angel has a strong international reputation due to its credibility and competence, its objective criteria, its institutionalised award process and its German government base.</td><td>Initial assessment – The initial audit is only based on documentation and the establishment of a contract between the operator and the verifier.
Surveillance – There is no surveillance activity (other than usual market surveillance)
Transparency – Although the standards are available, documentation is not publicly available regarding: verification procedure (in particular regarding surveillance and renewal activities), attestations or certificates, misuse, complaints and their resolution, etc.
Traceability – Where relevant, proof of sourcing of the materials can be required. Certificates are required, according to Forest Stewardship Council or equivalent certification systems, but there is no specified requirement on how long the records need to be kept or how often the certificates need to be presented to RAL gGmbH.
Consequences of non-compliance/misuse – Before the awarding of the label, the non-compliance must be corrected. There is no information on the consequences of misuse after the awarding of the label.
Governance – The independent body in charge of the verification is also in charge of the legal defence of the Blue Angel in the case of misuse, as well as the management of contracts on the use of the label by enterprises.</td></tr>
<tr><td colspan="3">Compliance system set-up</td></tr>
<tr><td>Initial process</td><td colspan="2">RAL gGmbH is responsible for applications and the overall management of verification of applications. The initial application process is made up of the following steps:
▪ 1. The applicant completes a questionnaire to show that the product/service is compliant with the Basic Award Criteria requirements. The letter accompanying this information also needs to include the brand and trade name of the product/service, the location of the applicant's factory where the product is manufactured, and the expected turnover (in €) for the year of the application.
▪ 2. RAL gGmbH evaluates the applicant's responses in the questionnaire, and works with the applicant to ensure that the product/service fulfills the necessary requirements.
▪ 3. The application receives a comment by the federal state (länder) in which the company's production facilities are located.
▪ 4. Once any non-conformities are corrected, a contract is concluded "Contract on the Use of the Environmental Label" between RAL gGmbH and the company.
▪ 5. The organisation has the legal right to use the Blue Angel label for a typical period of four years (this depends on the product group being labelled, as sometimes the contracts are for shorter or longer periods of time).</td></tr>
<tr><td>Surveillance</td><td colspan="2">RAL gGmbH's role includes legal defence of the Blue Angel in the case of misuse, and management of contracts on the use of the label with enterprises whose products and services have been awarded the label. This implies that an element of market surveillance is undertaken, but no public information is available on how this is done or with what frequency.</td></tr>
</table>

Blue Angel (Blauer Engel)	
Renewal	Contract periods vary according to the product group, and these are often timed to coincide with the anticipated updating of product group criteria, i.e. if new criteria are known to be prepared in three years' time, then a new applicant's contract will extend to that time. It is not clear what the renewal process is, whether it is a "lighter" verification that products still meet existing or new criteria or whether the organisation needs to go through a full application process again.
Transparency – Availability of information	
Requirements and other information for operators	Applicant organisations have to comply with the Basic Award Criteria set specifically for the product/service, and these are all available on the Blue Angel website. RAL gGmbH works closely with applicants, especially with small- and medium-sized enterprises (SMEs) throughout the application process to ensure appropriate compliance with the Basic Award Criteria compliance. The initial documentation the applicants have to provide is dependent on the Basic Award Criteria requirements.
Requirements and other information for verifiers	RAL gGmbH is the sole body responsible for the verification process. There are no documents publicly available on the guidance RAL has to perform the verification procedure or process for the Blue Angel, so it is not clear how extensive this verification is.
Registry of compliant products or organisations	An interactive database is available on the Blue Angel website pages where information can be found according to product group or brand. This information is largely commercial, acting as provisional information to potential purchasers. No official documentation, such as attestations or certificates, is available.
Complaint and fraud reporting	No public information has been found on cases of misuse of the label, or misrepresentation of information on the product/service to show non-compliance with the Basic Award Criteria or other abuses of the label. No information is available on the procedure for launching complaints, or on how these are dealt with. Similarly, no public information was found on any complaints or their resolution.
Traceability	
Record-keeping requirements	There is no relevant detailed information about traceability. The indications report that where relevant, Basic Award Criteria can require proof of sourcing of materials. This is the case for wood-based products, such as wood flooring. The first criterion in the manufacturing section relates to the origin of the wood and compliance verification requires that the applicant name the type of wood and indicate its origin. Certificates are required, according to Forest Stewardship Council or equivalent certification systems (EC, FSC, PEFC, GS mark, EU organic logo, German "Bio Seal", etc), but there is no specified requirement on how long the records need to be kept or how often the certificates need to be presented to RAL gGmbH. The Basic Award Criteria include the embedded/invisible aspects of products/services, and requirements vary according to the products. Impacts vary according to product group, including avoiding some substances/resources and production impact limits.
Management of invisible characteristics	The embedded impacts are verified through documentation. This documentation refers to existing certifications, tests or other regulations. For example for plastics, the manufacturer must provide a certificate to prove the origin and the composition of the recycled plastics according the EuCertPlast certification scheme (including calculated and plausibilized verification of the postconsumer waste percentage). The manufacturer must also provide the share of recycled and virgin plastics as well as the percentages of additives possibly used, by providing a test report. For additives, the manufacturer have to prove that he comply the REACH regulation. In some case, the manufacturer must simply send a written declaration to RAL gGmbH stating that these substances have not been added.

Blue Angel (Blauer Engel)	
Governance	
Process for developing the compliance system	The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) is the owner of the Blue Angel and it created the Blue Angel's implementation and management structure. RAL gGmbH has been responsible for the technical and legal verification of the Blue Angel and its applicants since the creation of the Blue Angel more than thirty years ago.
Process for updating the compliance system	Only general public information is available on RAL's role in ongoing verification of existing applicant's performance against Basic Award Criteria. BMU and UBA are involved in the update process but there is no detailed information on the process itself.
Control of verifiers	RAL is the sole verifier for the Blue Angel. No public information is available on how RAL is controlled by either BMU or UBA.

Cost of the compliance system

The costs for the Blue Angel can be divided into three parts: application, evaluation and usage costs.

Evaluation costs can vary and are paid by the applicant. The more complex and multi-layered a product or service is, the more extensive the evaluation requirements and their ensuing costs become. The label-awarding agency RAL gGmbH charges a one-time application fee of €250 (plus 19 % VAT) for Blue Angel applications. A graduated annual fee is paid to RAL gGmbH after the Contract on the Use of the Environmental Label has been signed. The amount of the annual fee for using the Blue Angel depends on the total annual turnover of the products or services covered by one Basic Award Criteria document. The following table shows the current grading scale:

ANNUAL TURNOVER in millions of Euro	ANNUAL FEE in Euro plus VAT	FEE CATEGORY
up to 0.25	270.00	1
from 0.25 to 1.0	540.00	2
from 1.00 to 2.5	1,080.00	3
from 2.5 to 5.0	2,110.00	4
from 5.0 to 15.0	3,050.00	5
from 15.0 to 25.0	4,500.00	6
from 25.0	6,000.00	7

The above costs do not reflect the running of the compliance scheme. These are difficult to identify as they involve BMU, UBA and RAL.

References

- General Blue Angel information: http://www.blauer-engel.de/en/blauer_engel/index.php
- General Blue Angel information for companies: http://www.blauer-engel.de/_downloads/publikationen_en/BE_Unternehmen_engl.pdf
- Basic information on the certification process: http://www.blauer-engel.de/_downloads/publikationen_en/BE_Unternehmen_engl.pdf
- Basic Award Criteria documents for all the products/services: : http://www.blauer-engel.de/en/company/survey_basic_award_criteria.php
- Initial application information requirements: http://www.blauer-engel.de/_downloads/vergabegrundlagen_en/E-INT-ANTR.pdf
- Interactive database of compliant products/services/companies: http://www.blauer-engel.de/en/products_brands/search_products/search_for_products.php
- Example of Basic Award Criteria for "products containing recycled plastics":
- http://www.blauer-engel.de/en/products_brands/vergabegrundlage.php?id=245
- Example of Basic Award Criteria for "floor coverings made of wood": http://www.blauer-engel.de/en/products_brands/search_products/produkttyp.php?id=155
- RAL brochure: http://www.ral-umwelt.de/fileadmin/lib/pdf/umwelt/RU_Imagebroschuere_2008.pdf

CE marking

<table>
<tr><th colspan="3">CE marking</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">CE marking is a mandatory conformity marking for products placed on the market in the European Economic Area (EAA). This regulatory mark proves that the product complies with EU legislation on health, safety and environmental protection. It also enables free movement of the product within the EEA.</td></tr>
<tr><th colspan="2">Advantages</th><th>Drawbacks</th></tr>
<tr><td colspan="2">Initial assessment – The initial assessment depends on the product category. It is based on the documentation of design and product stages, tests of samples or all products and for some product categories, inspection of the quality management. The verification is the responsibility of the manufacturer and concerns the company and its products. Nonetheless, the manufacturers must be able to prove that its suppliers also comply with the standards.

Flexibility – Standards and compliance verification process depends on the type of products and the associated risks.

Traceability – Traceability efforts through the identification of the product and the manufacturer on the declaration of conformity, the provision of a technical file, the affixing of the Notified Body's identification number in the products. The documentation must be accessible at least for ten years.

Consequences of non-compliance/misuses – In case of non-compliance, measures and sanctions that apply for the counterfeiting of the CE marking vary according to Member States' national administrative, civil and criminal laws. Depending on the seriousness of the crime, the company at fault may risk a fine and, in some circumstances, imprisonment.

Governance – The norms are developed by the European Commission.

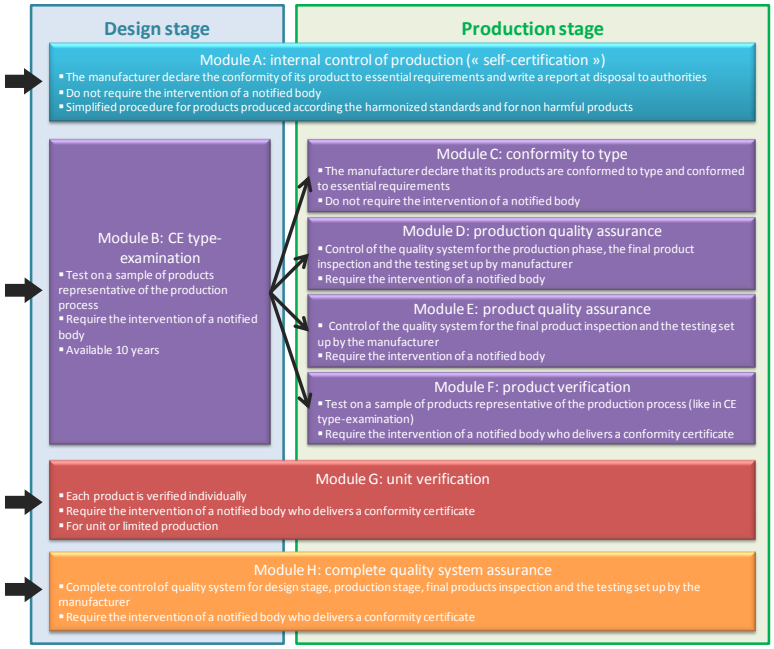
Recognition – The CE marking is recognised internationally and is essential to be in the European market.</td><td>Initial assessment – The verification is the responsibility of the manufacturer and concerns the company and its products. Nonetheless, the manufacturers must be able to prove that its suppliers also comply with the standards.

Surveillance – While the system is mandatory and determines the placing on the market of products, the compliance system is limited to an initial verification.

Intervention of a verifier – The initial verification to ensure the conformity of a product is performed by the manufacturer. For most products, the intervention of a Notified Body (accredited third-party) is not required. As an example, for some medical devices and toys, it is not mandatory. Moreover, the accreditation process is similar across Member State but can vary from one Notified Body to another. Member States are free to choose how they make sure the Notified Bodies have the required skills.

Validity of the proof of compliance – The CE marking is valid indefinitely until a change of the directive, the products, or the design/production processes.

Embedded/invisible impacts – For some products, such as measuring instruments, only measurable characteristics are verified through tests. For others, such as toys, the quality system is audited.</td></tr>
</table>

<table>
<tr><th colspan="2">CE marking</th></tr>
<tr><td colspan="2">Compliance system set-up</td></tr>
<tr><td>Initial process</td><td>There are five steps to the marking of a product:
▪ 1. Verification of the product-specific requirements – After having identified the directives applicable to its products, the manufacturer must ensure that its product complies with the essential requirements of the relevant EU legislation. The manufacturer can use the Harmonised European standards that are issued with reference to the applied directives and express the essential requirements in detailed technical terms. Full compliance of a product to the harmonised standards gives a product the "presumption of conformity".
▪ 2. Identification of whether an independent conformity assessment is required from a Notified Body – Each directive specifies whether an authorised third party (Notified Body) must be involved in the conformity assessment procedure.
▪ 3. Conformity assessment – Testing the product and checking its conformity to the EU legislation is the responsibility of the manufacturer. The compliance assessment system is a two-step procedure. It concerns the product design and production stages. Overall, there are two types of compliance assessment systems: self-declaration and verification by a Notify Body. Eight procedures types are possible.
 
</td></tr>
<tr><td>Initial process</td><td>▪ 4. Drawing up of the technical documentation – The manufacturer has to establish the technical documentation for the assessment of the product's conformity and for the risk assessment. Together with the EC declaration of conformity, the technical documentation must be presented to the appropriate national authorities upon request.
▪ 5. Marking – The manufacturer must affix the CE marking to the product or its data plate and the identification number of the Notified Body if relevant. The manufacturer draws up and signs an "EC declaration of conformity" proving that the product meets the requirements. The CE marking is valid indefinitely until a change of the directive, the products or the design/production processes.</td></tr>
<tr><td>Surveillance</td><td>Continued assurance of conformity is ensured through market surveillance.
In case of non-compliance, measures and sanctions that apply for the counterfeiting of the CE marking vary according to Member States' national administrative, civil and criminal laws. Depending on the seriousness of the crime, the company at fault may risk a fine and, in some circumstances, imprisonment.</td></tr>
<tr><td>Renewal</td><td>If the product and the design/production processes remain the same, the CE marking is valid indefinitely and thus, in that case, there is no renewal procedure.
Otherwise, the manufacturer must implement internal measures to ensure that the product remains in conformity with EU legislation.</td></tr>
</table>

CE marking	
Transparency – Availability of information	
Requirements and other information for operators	The certification process and the standards for each product category are available at: http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/professionals/manufacturers/index_en.htm For example, documents regarding toys are available at: eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:170:0001:0037:en:PDF The list of the notified bodies is available at: http://ec.europa.eu/enterprise/newapproach/nando/
Requirements and other information for verifiers	The requirements or guidance documents for notified bodies do not seem to be publicly available.
Registry of compliant products or organisations	A list of certified operators does not seem to be available. Nonetheless, all the products concerned by CE marking that can be bought in Europe should be certified.
Complaint and fraud reporting	The European market surveillance database (http://www.icsms.org) can be used to search for non-compliant products. Products showing non-compliances with CE marking can be found in this database. Complaints do not seem to be communicated.
Traceability	
Record-keeping requirements	If a product complies with the essential requirements, the manufacturer affixes the CE marking on the product and draws up an "EC declaration of conformity". Both the "EC declaration of conformity" and the technical documentation must be presented to the appropriate national authorities upon request. The declaration of conformity must contain the product identification, the appropriate EU directives, the standards used to verify compliance with the directives, the name of the Notified Body used (if its use is required), signature on behalf of the manufacturer or the authorised representative, and the manufacturer's name and address. The manufacturer also has to provide a technical file that demonstrates the technical bases for the conformity of the product to the requirements of the directive. The file is mainly intended for the use of competent authorities and must be accessible at least for ten years. An apparatus is comprised of the following (usually accompanied by block diagram): wiring and circuit diagrams, a general arrangement drawing, the list of standards applied, records of risk assessments and assessments to standards, the description of control philosophy/logic, datasheets for critical sub-assemblies, a part list, copies of any markings and labels, a copy of instructions (user, maintenance, installation), test reports, quality control and commissioning procedures, and the declaration of conformity should be included in this file. The product must be accompanied by instructions and safety information in a language that can be easily understood. The manufacturer must affix the CE marking to the product or its data plate. If a Notified Body was involved in the production control phase, its identification number must also be displayed. The distributors and importers must ensure that the product they sell have the CE marking. They must be able to prove it in case of a demand from authorities.
Management of invisible characteristics	Except the audit of the quality system, the regulation does not provide specific elements to verify embedded impacts, trusting manufacturer declaration. Thus, the manufacturer has to provide a description of the mean used to ensure the conformity and if appropriate the test certificate. Example of embedded impacts: "Toys must be so designed and constructed as to minimize the risk of physical injury which could be caused by the movement of their parts."No other specific requirements are mentioned.
Governance	
Process for developing the compliance system	Information about the development and revision of norms is available at: http://ec.europa.eu/enterprise/policies/single-market-goods/files/blue-guide/guidepublic_en.pdf There does not seem to be any information about the method for developing and revising the CE marking certification process.
Process for updating the compliance system	

CE marking	
Control of verifiers	The third-party verification bodies are authorised by national authorities, officially "notified" to the Commission, and listed in the NANDO (New Approach Notified and Designated Organisations) database. The national authorities choose the verification bodies according to a list of competence criteria. Member States are responsible for ensuring that notified bodies have and maintain the verification skills requirements. Member States are free to choose how they make sure the Notified Bodies have the required skills The body can be accredited (and be subject to surveillance) regarding the EN 45000 standards) but this process is not mandatory. The accreditation process is the same across Europe. The European Commission does not control the Notified Bodies competences.
Cost of the compliance	
Costs are associated with conformity checks and drawing up technical documentation. Certain products require an authorised third party (Notified Body) to carry out the conformity assessment procedure. These Bodies are authorised by national authorities and officially 'notified' to the Commission and listed in the NANDO (New Approach Notified and Designated Organisations) database. Costs vary according to the manufacturer and the type of product. Costs are minimal where the assessment can be carried out internally. Where third party assessment is needed, the cost will likely be greater. No joining fee and no annual fee. Manufacturer is responsible for product assessment and compliance – pricing system is not available as all costs are individual to the manufacturer.	
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▪ European Commission, 2010. Guide to the implementation of directives based on the New Approach and the Global Approach ▪ DGUV Test, 2011. Comparison of the CE Mark and Certification Marks ▪ European Commission (2011) CE marking makes Europe's market yours! http://ec.europa.eu/enterprise/policies/single-market-goods/cemarking/downloads/ce_brochure_en.pdf	

EU Organic farming label

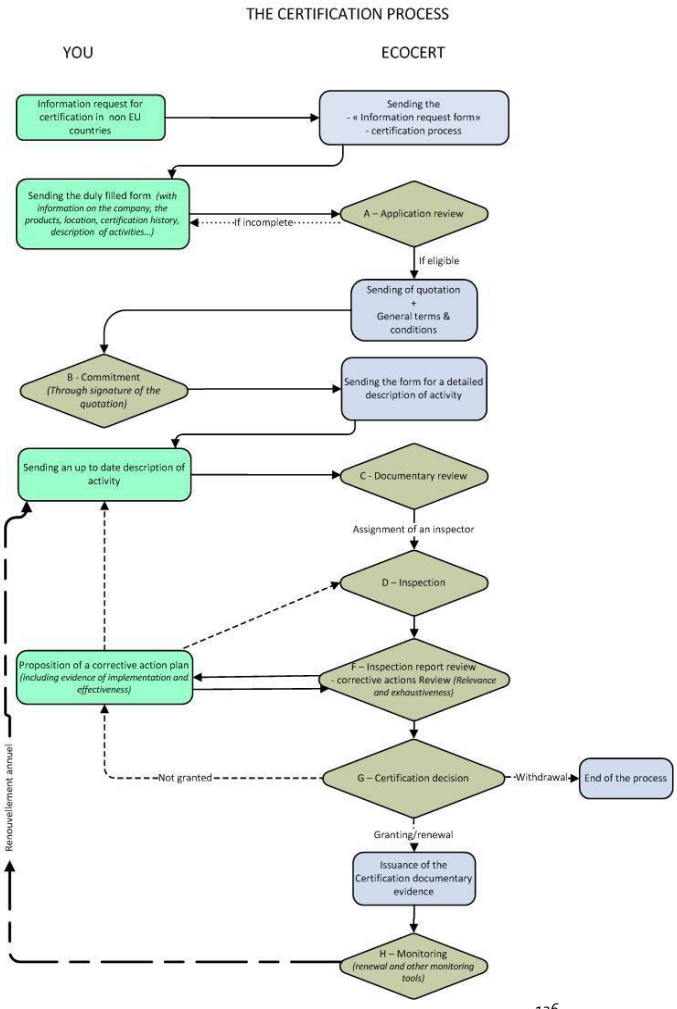
EU Organic farming label	
Key messages	
Nature of the scheme	The EU organic farming product label indicates that at least 95% of the agricultural ingredients of food products are organic. It guarantees the respect of the rules of organic farming (e.g. very limited use of chemical pesticides and fertilisers, crop rotation, free-range and open-air livestock breeding, etc.). Farmers, processors and importers are certified.

Advantages	Drawbacks
Initial assessment – The compliance system includes a documentation review and an on-site inspection. Tests on a sample of product can also be performed. The compliance system of this scheme concerns producers, processors, and importers (value chain). **Surveillance –** At least once a year, a physical monitoring inspection is performed to renew the certification. The verifier can also perform random visits and inspection of a sample of producers for groups. **Intervention of a verifier –** The inspection is performed by an independent accredited body. **Flexibility –** The certification can be awarded in case of non-compliance if remedial and corrective measures are implemented. Furthermore, each Member State can decide to exempt from the control system operators selling products directly to the final consumer. A Member State and Europe can also help operators to certify their products by providing subsidies. **Transparency –** The initiative is transparent with a view to enhancing farmer participation. Information on the standards, the verification guidance, the control bodies, and the certified operators are publicly available. **Traceability –** Whenever the EU organic logo is used on a product, it has to be accompanied by the code number of the control body or authority to which the operator who has carried out the most recent production or preparation operation is subject. **Invisible characteristics –** The label is mostly based on the verification of embedded impacts. It is verified through in-depth verification, including reviews of documentation (fertilization plan, invoices…), residue testing, visual inspection (of buffer zone for example), random visit, etc. **Consequences of non-compliance/misuse –** In order to prevent non-compliance, farmers must respect a conversion period of a minimum of two years. If non-compliance is identified, the producer must implement remedial and corrective measures. In case of misuse, the certifier prohibits the operator from marketing products with reference to organic production. **Recognition –** The label is highly known in Europe	**Validity of the proof of compliance –** The certificate is valid indefinitely unless the control body collects proof of non-compliance during a surveillance inspection **Flexibility –** The cost of organic certification can vary significantly among MS, which can cause inequality among MS. Moreover, MS can decide to exempt certain operators: there is a risk of non-compliance in this case. **Transparency –** The lists of frauds and complaints is not available (but can discourage farmers to participate) **Consequences of non-compliance/misuse –** The conversion period before the certification process can be economically damaging for farmers. **Governance –** Each Member State elaborates its own certification and surveillance process based on the minimal requirements mentioned by the regulation.

EU Organic farming label	
Compliance system set-up	
Initial process	Each Member State elaborates its own certification and surveillance process based on the minimal requirements mentioned by the regulation. There are five steps to EU organic farming certification. ▪ **1. Conversion to organic farming –** Conventional farmers must first undergo a conversion period of a minimum of two years before they can begin producing agricultural goods that can be marketed as organic. If they wish to produce both conventional and organic produce, they must clearly separate these two operations throughout every stage of production. ▪ **2. Request –** The operation must notify its activity to the competent body and send a request to the control body/authority who verifies the eligibility of the operator. The control body/authority elaborates a quote and a planning for certification. ▪ **3. Commitment –** The operator must fill in a commitment form that provides information on the activities, the practical steps to ensure compliance with organic production rules and details about precautions taken to reduce the risk of contamination from unauthorised substances. The operator also commits to accepting the compliance procedure (audit, documentary review, samples analysis, etc.). He must also notify updates such as activity modification, use of unauthorised substances or processes of products to the control body. ▪ **4. Evaluation –** The control body/authority verifies the operator declaration and the documentation. If needed, the control body/authority may ask the operator to implement corrective measures based on the information provided. Once the operator has taken the corrective measures, the control body/authority performs at least one physical inspection per year. Sampling and analysing of products must be used as a supplementary tool to the physical inspection in case of suspicion of non-authorised products. ▪ **5. Certification –** The control body/authority draws up a control report. In particular, it draws a list of the non-compliance observed (if any) and suggests corrective measures. The operator is then invited to provide evidence of the remedial actions (to address the consequences of non-conformity) and corrective actions (to ensure the issue cannot arise again) taken to address these instances of non-compliance. Based on the report and the response to non-compliance, the control body/authority provides the documentary evidence (certificate) to the operator. In cases of non-compliance, it prohibits the operator from marketing products with reference to organic production. In case of importation of a product in Europe, an import inspection certificate must accompany products. Exemption: Member States may decide to exempt from the control system operators who sell products directly to the final consumer or user. The Regulation recognises that it may be disproportionate to apply notification and control requirements to certain types of retail operators such as those who sell products directly to the final consumer or user. In that case, the operators do not have to notify their activity to the competent authority.
Surveillance	The control body/authority implements a monitoring plan. For example, in France, the monitoring plan is based on the products concerned, the previous inspection reports, the identified risks of a product, etc. The plan can include additional in-depth inspections, additional documentary verification, tests, introduction of risk assessment tools, etc. The control body/authority performs an inspection at least once a year. Therefore, the operator must keep its documentation up-to-date (e.g. modification of production processes or of products characteristics). The inspection covers all activities and assesses the associated risks. The risk assessment is based on pre-defined criteria, including three compulsory criteria: the results of previous controls, the quantity of products concerned and the risk for exchange of products. The control body/authority can also perform random visits, and a partial inspection may be carried out for groups. Consequently, the control body only inspects certain members of the group and assesses the internal control system of the group.
Renewal	The certificate is valid indefinitely unless the control body collects proofs of non-compliance during a surveillance inspection.

EU Organic farming label

Example of a certification process:



Certification process in France (Source Ecocert[126])

[126] http://www.ecocert.com/sites/default/files/TS01%20(EC)v09en_Certification%20process.pdf

EU Organic farming label	
Transparency – Availability of information	
Requirements and other information for operators	General documentation on organic farming (rules, promotion programmes, seed database, statistics, research projects, experts, logo, European action plan) is available at: http://ec.europa.eu/agriculture/organic/eu-policy_en The legislation documentation on organic farming is available at: http://ec.europa.eu/agriculture/organic/eu-policy/legislation_en The general regulation is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:189:0001:0023:EN:PDF Concrete and detailed rules for implementing the regulations are available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:250:0001:0084:EN:pdf and for the import of organic products: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:334:0025:0052:EN:pdf Control bodies may also provide guidance for certification (with a more pedagogical content). For example: http://www.ecocert.com/sites/default/files/TS01%20(EC)v09en_Certification%20process.pdf The list of control bodies and authorities is available at: http://ec.europa.eu/agriculture/organic/files/consumer-confidence/inspection-certification/EU_control_bodies_authorities_en.pdf The documentation that the operators have to provide is indicated in the certification rules.
Requirements and other information for verifiers	The regulations related to the control system are available in the general regulation document for organic farming (See previous section, Article 23) Guidelines written to facilitate the understanding of the regulation are available at: http://ec.europa.eu/agriculture/organic/files/eu-policy/data-statistics/control_guidelines_version_08072011_en.pdf These guidelines can be used by control authorities.
Registry of compliant products or organisations	A list of certified operators can be available on the control bodies websites. For example, EcoCert has published the list of the operators in third countries: http://www.ecocert.com/sites/default/files/u3/Liste-des-operateurs-en-pays-tiers-2013-04-15.pdf
Complaint and fraud reporting	The control bodies systematically communicate the irregularities found on organic farming to the relevant authorities in charge of EU Rural Development or EU Fisheries Fund. The list of frauds does not seem to be publicly available. According to the FP7 study Certcost, depending on the country and the year under consideration, the share of slight non-compliance, which induces corrective measures, varies from 1% to 49%. The share of severe non-compliance (i.e. non-conformities that can lead to a prohibition to sell products on the market) varies from 0% to 4%. The share of non-compliance can vary considerably between years and countries. Complaints do not seem to be publicly communicated.

EU Organic farming label	
Traceability	
Record-keeping requirements	An operator must: ▪ Notify its undertaking to the competent authority; ▪ Sign a declaration that it performs according to the organic rules; ▪ Record and keep description and documentary accounts of its operation; ▪ Verify the documentary evidence of its suppliers and the vendor declaration; ▪ Notify any relevant change and modification of the organic production to the control body; ▪ Allow access to all concerned premises; ▪ Countersign the control report; And in specific cases: ▪ Declare and describe specific operations; ▪ Notify the schedule of crop production and harvest; Declare the use of veterinary medicinal products; ▪ Notify the movement of apiaries. Competent authority The competent authority must draw up reports of the controls it has carried out. It must also exchange information in case of irregularities and infringements. Control bodies must: ▪ Declare and describe their specific operations; ▪ Notify annually the schedule of crop production. The control body must implement a monitoring plan. It includes the products concerned, the previous inspection reports, the identified risks of a product, any changes. Proof of compliance Whenever the EU organic logo is used on a product, it has to be accompanied by the code number of the control body or authority to which the operator who has carried out the most recent production or preparation operation is subject.
Management of invisible characteristics	Embedded impacts are verified through documentation. For instance the livestock record provides evidences such as invoices and packaging labels indicating the entering animals (origin, number, conversion period, veterinary history and identification marks), animals leaving (age, number, destination, identification mark, weight if slaughtered), the eventual losses, feeding (quantity, diet formulation, and origin), disease prevention and veterinary care and cleaning records and delivery orders for animal flows. Information simply indicated by farmers such as cleaning records is difficult to verify. For food manufacturing, invoices, recipes, stock records, technical sheets for all ingredients of non agricultural origin, analysis reports proving that the water is of drinking quality packaging labels, certificates from suppliers are required. In addition to document tracking, on-site inspection and random visit can be performed.
Governance	
Process for developing the compliance system	The regulations regarding food law and food and feed control (Regulations 178/2002/EC and 882/2004/EC) require that each member state implement a system of control, surveillance and monitoring for all stages of production of food, including organic food. Hence, a member state shall prepare an integrated Multi-Annual National Control Plan (MANCP) and submit an annual report of the implementation of the MANCP to the Commission every year. The report aims at outlining the progress in the implementation of the MANCP and assessing the effectiveness of the control system. Guidelines to elaborate the MANCP and the reports were elaborated by the Commission. Minimal control requirements are set by the Regulation.
Process for updating the compliance system	There is no specific information about updating the compliance system.

EU Organic farming label	
Control of verifiers	Each member state designates (a) competent authority(ies) responsible for organic controls. This authority may delegate its authority to control bodies. The competent authority shall ensure the effectiveness and appropriateness of controls, the competence and appropriateness of the control bodies, and it shall have a specific procedure for this. It must carry out internal audits or may have external audits carried out. It shall also designate laboratories that may carry out the analysis of samples during the control. It shall take actions and sanctions in case of non-compliance. The control bodies must be competent and accredited to EN 45011 or ISO Guide 6 and optionally to EN 45004. Control bodies do not necessarily have to be located in the Member State, therefore a member of the European cooperation for Accreditation performs the accreditation. The European Commission, through the Food and Veterinary Office (FVO) of DG SANCO, also performs surveillance activities in Member States. These activities include: ▪ a documentary review of the functioning and of the quality management system; ▪ an audit, checking the operator files, the handling of non-conformities and complaints, evaluating the competence of the staff and performing interviews with the staff; ▪ reporting on a representative number of visits to operators in order to carry out review and witness audits. Reports from these audits are publicly available (e.g. http://eca.europa.eu/portal/pls/portal/docs/1/15220773.PDF)
Cost of the compliance	
The cost of the compliance system varies from one member state to another. According to a FP7 study on economic analysis of certification systems for organic food and farming, the share of certification costs is estimated to be in a range of 3% of the farm's total turnover and globally 1% or less of the retail sales price (from 0.1% to 2.1%, depending on the product and the country) in 2008. This cost is composed of certification fees, efforts for documentation, preparation for the control visit, the control visit and the possible follow-up visits. The cost seems to depend on the products concerned, the size of the organisation, the turnover, etc. These parameters influence the time needed for inspection. The time spent and the hourly fees vary within a country and between countries. The FP7 study calculated the cost of certification for 7 countries: ▪ For farmers, the inspection fees were about €500 per farm (median) in 2008, ranging from €318 in Czech Republic to €647 in the UK (except for Denmark where the certification is free of charge for organic operators since the government carries the charge). ▪ For processors, the median inspection fees varied from €470 in Czech Republic to €1,400 in Germany, which represents 0.06% for Denmark to 0.91% for Italy of the global organic turnover of the country. ▪ The administrative cost (not paid by the operator) are: o The cost of surveillance varies from €30 in Switzerland to €325 in Denmark per operator. o The administrative cost for European organic label is €7 per operator. o The cost of organic certification in Denmark is €253 per operator. The certification cost can be indicated on the website of the control bodies/authorities. The share of control bodies that have public price lists on their website is very heterogeneous. It varies from 14% to 67%. Example of cost: in France in 2011 for example, a vegetable producer who owns two hectares pays about €400 per year, a breeder and grain producer who owns 50 ha pays between €550 and €700 per year. The cost can be partly carried out by the Regions and Europe (until a total of 100%).	

EU Organic farming label
References
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Forest Stewardship Council (FSC)

Forest Stewardship Council (FSC)		
Key messages		
Nature of the scheme	Forest Stewardship Council (FSC) certification is a voluntary labelling initiative. A product with the FSC trademark guarantees that it originates from well-managed forests, which provides environmental, social and economic benefits. There are two main types of certification: forest management certification and chain of custody certification[127], which relate respectively to production and subsequent progress of forest products through the value chain.	
Advantages		**Drawbacks**
Initial assessment – The certification system includes an initial audit based on a pre-evaluation to assess the eligibility of the organisation. Then the verifier performs a documentation review and an on-site audit. At each stage of the processing chain, CoC certification is needed to make sure that FSC-certified wood products are kept separated from uncertified products or mixed in approved ways. Thus, for Chain of custody certification, the verifier performs a visit on a sample of forests and/or suppliers. **Surveillance –** Annual surveillance audits are performed. It includes the assessment of corrective actions, on-site visits, interviews, etc. **Intervention of a verifier –** Initial and annual surveillance audits are conducted by third-party auditors that are accredited by the ASI. **Validity of the proof of compliance –** All certificates are valid for a predetermined period of five years. **Flexibility –** Certification can be awarded in case of minor non-conformities that have to be fully corrected within 1 year. Major non-conformity must be corrected within three months. Procedure and requirements are simplified for small scale and low intensity managed forests. The cost depends on the size of the organisation – in terms of employees and turnover – and its localisation. Moreover, the standards are adapted to national or regional context. **Transparency –** The initiative is highly transparent: information on standards, verification process, infringers, and complaints is publicly available. **Traceability –** The list of records to provide is available on the initiative's website. The certification body must keep the records listed in the standards for certification body accreditation for seven years. **Invisible characteristics –** Invisible impacts are at the heart of the CoC verification. Impacts such as ecological protection or indigenous' right are verify through documentation, visits or interviews. **Consequences of non-compliance/misuse –** Before the delivery of the label, the verifier can ask for corrective measures. The label cannot be delivered in case of major non-conformity or a large number of minor non-conformity. After the label delivery, the occurrence of five or more major-non-conformities during one surveillance evaluation results in the suspension of the certification. Moreover, the FSC has developed a dispute resolution centre and complaints procedures to help stakeholders express the concerns they may have with the operation of the FSC system. Finally, FSC is monitored by an independent group called FSC-watch (www.fsc-watch.org) which is often critical of FSC projects. **Governance –** Voting power within FSC is shared equitably between different interest groups (social, environmental and economic stakeholders) and levels of economic power. Also, to ensure that we have globally fair representation, members represent either North or South sub-chambers. **Recognition –** the FSC label is known worldwide as its credibility.	**Flexibility –** Flexibility can also be a risk of misuse. For example, during surveillance, up to four major non-conformities can be observed without certification suspension. **Traceability –** There is no information regarding the period during which the certified organisation must keep the records.

[127] A third type of certification is "controlled wood" which is designed to allow organisations to avoid the categories of wood considered unacceptable by FSC. FSC Controlled Wood can only be mixed with FSC certified wood in labelled FSC Mix products.

Forest Stewardship Council (FSC)	
Compliance system set-up	
Initial process	The general application process is as follows: ▪ **1. Contact and planning –** The organisation contacts a certification body (one or several). The certification body (CB) provides information about the requirements for FSC certification and establishes a quote. ▪ **2. Pre-evaluation –** The certification body performs a pre-evaluation of management systems to assess the eligibility of the organisation. In so doing, it performs a basic documentation review and discusses with forest managers their activities as well as the certification procedure and FSC requirements. Based on this information, the certification body identifies potential major gaps and prepare a pre-evaluation report. A public consultation can be mandatory at this stage (for plantation larger than 10 000ha, non-plantation forest types larger than 50 000ha and forest containing high conservation value attributes). If necessary, the certification body can ask the applicant to take corrective measures (corrective actions requests, CAR). ▪ **3. Evaluation –** The certification body collects the key documents and records. Afterwards, based on the document review, the certification body performs an on-site audit to analyse the forest management units and evaluate the management systems. For forest management as for Chain of Custody certification, the certification body must visit a sampling of forest unit or operational sites or suppliers. In the case of controlled wood, the certification body must evaluate the risk assessment strategy and effectiveness of the company. In addition to visiting the site(s), the certification body performs interviews of people affected and/or involved in the forest management. Non-conformities can be considered as minor non-conformities or major non-conformities. A certificate cannot be issue or re-issued if there are outstanding major non-conformities or a large number of minor non-conformities with applicable certification requirements. Minor non-conformities have to be fully corrected within one year, major ones within three months. At the end of the audit, the certification body prepares an evaluation report. ▪ **4. Certification –** If the certification decision is positive, the operator receives an FSC certificate. If the audit revealed that the operation is not in full compliance with the FSC requirements yet, then further audits can be made after the changes suggested in the certification report have been implemented. The certificate is valid for five years. Smallholders have simplified procedures and requirements. For example, a fully documented management system is expected for large enterprises while a system based on verbal descriptions and simple documentation may be sufficient for small scale or low intensity enterprises. Smallholders can also be certified per groups. In that case, they nominate a group manager who is responsible for the certification procedure management, make sure that the members comply with the requirements and keep records. The group manager shall implement an internal control system including risk assessment, internal monitoring and control procedure. Hence, the certification body audits the group manager and a sample of the group members. Non-timber forest products (NTFP) such as nuts, honey, fruit, can also be evaluated.
Surveillance	Annual surveillance audits are conducted by the FSC accredited certification body to verify continued compliance with FSC certification requirements. Surveillance evaluations may be more frequent depending on factors such as the results of risk assessment in the case of group certification, the complexity of the CoC control system, the number and nature of non-conformances identified by the certification body, the number and nature of complaints submitted by stakeholders, etc. Surveillance includes: ▪ the evaluation of the corrective actions ▪ the review of any complaints of non-conformity ▪ the evaluation of a sample of sites and records, as well as interviews with stakeholders. ▪ under certain conditions, the surveillance may not require site visits of forest management units, depending on the number and size of the forest management units, if there are no outstanding corrective actions to be evaluated which may require site verification, no complaints requiring evaluation and no significant forest activities have taken place in the previous 12 months. ▪ During one surveillance evaluation, the occurrence of five or more major-non-conformities results in the suspension of the certification.

Forest Stewardship Council (FSC)	
Renewal	After five years, a renewal audit is necessary. The certification body may re-issue a certificate that has expired based on the re-evaluation of the certificate holder's conformity with all the applicable FSC standards. Re-evaluation follows the same procedures as the main evaluation except that the certification body is not required to submit the pre-evaluation report for peer review and to prepare a full new certification report.
Transparency – Availability of information	
Requirements and other information for operators	FSC has general Principles and Criteria and generic standards available at: https://ic.fsc.org/principles-and-criteria.34.htm and https://ic.fsc.org/standards.340.htm In addition, generic standards are completed with national standards. Indeed, it is necessary to adapt at the regional or national level the general principles in order to reflect the diverse conditions of timber production in different part of the world. National standards are available at: https://ic.fsc.org/national-standards.247.htm Information on the standards related to each certification process is available at: ▪ For Forest Management certification: http://ic.fsc.org/force-download.php?file_connector=315 ▪ For Chain of Custody certification: http://ic.fsc.org/force-download.php?file_connector=1144 ▪ For Controlled Wood: http://us.fsc.org/download.controlled-wood-standard-for-forest-management-enterprises.107.pdf
Requirements and other information for operators	There are also specific interpretations of standards: ▪ In order to make the FSC Principles accessible to all forests (i.e. forests of different size or production intensity), there are standards for small and low intensity managed forest (SLIMF). It includes a simplified and costless certification procedure, an eligibility criteria system that identifies operations eligible for the modified certification procedures and specific guidance. ▪ The interpretation is available at: http://ic.fsc.org/force-download.php?file_connector=471 ▪ There are also specific standards for group certification (that allows to share the certification costs): http://ic.fsc.org/force-download.php?file_connector=723 The list of the approved certification bodies is available at: http://www.accreditation-services.com/archives/certification_bodies. The list of national certified bodies is indicated on each national FSC website. FSC also provides guidance documents to help in the application of the requirements of the standard: https://ic.fsc.org/guidance.335.htm
Requirements and other information for verifiers	The procedure related to each certification process is available online. ▪ For Forest Management certification at: http://ic.fsc.org/force-download.php?file=189 ▪ For Chain of Custody certification at: http://ic.fsc.org/force-download.php?file=192 General requirements for FSC accredited certification bodies can be found at http://ic.fsc.org/force-download.php?file_connector=1130
Registry of compliant products or organisations	The FSC certificate database is available at: http://info.fsc.org/. It provides up-to-date information about the FSC certificates issued. For each certificate, detailed information such as the certificate code, its status, the license number and its status, the issue date, the expiry date, the organisation name and the country in which it is located is available.
Complaint and fraud reporting	The FSC infringers list is publicly available at: https://ic.fsc.org/fsc-infringers-list.51.htm The FSC has developed a dispute resolution centre and complaints procedures to help stakeholders express the concerns they may have with the operation of the FSC system. Details on the functioning of the system are available at: https://ic.fsc.org/dispute-resolution.139.htm and https://ic.fsc.org/complaints-resolution.306.htm To submit a complaint, a form is available at: https://ic.fsc.org/dispute-submission-form.170.htm Registries of closed and ongoing disputes are available at: https://ic.fsc.org/closed-disputes.317.htm and https://ic.fsc.org/ongoing-disputes.354.htm. Moreover, the FSC is monitored by an independent group called FSC-watch (www.fsc-watch.org) which is often critical of FSC projects.

Forest Stewardship Council (FSC)	
Traceability	
Record-keeping requirements	The guidance for the evaluation of the standards compliance provides a (non-exhaustive) list of the documents and records that the organisation must provide during the certification process (http://ic.fsc.org/force-download.php?file=189 and http://ic.fsc.org/force-download.php?file=192). The certification body must keep the records listed in the standards for certification body accreditation for seven years: http://ic.fsc.org/force-download.php?file_connector=1130
Management of invisible characteristics	Embedded impacts are verified through documentation, in particular sales records and material balances, invoice, maps or management system documentation. A simplified system based on verbal descriptions and simple documentation may be sufficient to implement the requirements of the applicable Forest Stewardship Standard for small scale or low intensity enterprises. To evaluate the management system, the certifier will evaluate the technical resources available (type and quantity of equipment) and the human resources available (number of people involved in management, the level of training, the availability if expert advice if needed). Document such as work instruction can also constitute an element of proof. The auditor will also perform on-site visit and interview various stakeholders.
Governance	
Process for developing the compliance system	FSC has three levels of decision making: ▪ The General Assembly of FSC members is composed of three chambers – environmental, social and economic – which are further subdivided into northern and southern sub-chambers. Voting power is shared equitably as each chamber holds 33.3% of the weight in votes regardless of the number of members in each chamber. Within each chamber, votes are weighted to ensure that north and south each hold 50% of the votes. ▪ The Board of Directors is made up of nine representatives elected for three years (three from each chambers). ▪ The Director General is a team who runs FSC International on a day-to-day basis. The FSC has developed a Procedure for the Development and Revision of FSC Normative Documents. It is available at: http://ic.fsc.org/force-download.php?file=316. It concerns policies, standards and procedures. A facilitator appointed by the FSC Policy and Standards Director manages the development and revision process. The facilitator sets up and manages a working group, consisting of members of FSC and experts, and a consultative forum, composed of FSC stakeholders. The facilitator, together with the working group, elaborates a working plan and drafts the document. The draft is then submitted to a public consultation and, once the comments are taken into account, the draft is pilot tested. A steering committee, consisting of the FSC Executive Director, the FSC Policy and Standard Director, and the Facilitator, supervises and approves each step of the development and revision. After the pilot testing, the steering committee prepares a report and presents the draft normative document to the FSC Board of Directors who approves or requests further works. There is a standard providing requirements on how to maintain an develop national standards: http://fr.fsc.org/download.fsc-std-60-006v1-2endevelopmentnationalfss.70.htm
Process for updating the compliance system	
Control of verifiers	Independent third-party auditors conduct audits. Auditors are accredited for FSC forest management evaluation and/or FSC CoC evaluation. Auditors' accreditation is delegated to the ASI (Accreditation Services International). General requirements for FSC accredited certification bodies can be found at http://ic.fsc.org/force-download.php?file_connector=1130

Forest Stewardship Council (FSC)

Cost of the compliance

The cost of the compliance system depends on a variety of factors: the size of the organisation, the number of individual sites, the geographic location, the FSC accredited certification body chosen, the complexity of the business, whether other management systems such as ISO14001 or ISO 9001 are already in place, etc.

"Fixed" costs include the FSC membership fees. These fees vary according to the location of the individual or organisational member (South or North). For organisations, membership fees also vary according to the type and size of the organisation. These membership fees represent a small part of the total cost. Additional cost for the operators relates to the certification services provided by the certification body.

FSC Membership Fee Structure

Individual members:

	Annual fee (US Dollars)
North	$100.00
South	$38.00

Organizational members The fee structure for organizations is based on either the number of employees the organization has or its turnover (revenues / expenses for non-profit organizations) depending on what is easier for you to measure.

Non-Profit Organizations:

Subcategory	Size of organization		Annual Fee (US Dollars)	
	Based on # of employees	Based on turnover (US Dollars)	South	North
Small	1-100	>15 million	$75	$150
Medium	101-200	15-30 million	$500	$1000
Large	201-1000	30-150 million	$1000	$2000
Very Large	>1000	>150 million	$2500	$5000

For-Profit Organizations:

Subcategory	Size of organization		Annual Fee (US Dollars)	
	Based on # of employees	Based on turnover (US Dollars)	South	North
Very Small	1-100	>20 million	US $100	US $200
Small	101-200	20-40 million	US $750	US $1500
Medium	201-1000	40-200 million	US $1500	US $3000
Large	1001 – 10,000	>200 – 2 Billion	US $4500	US $6000
Very Large	>10,000	> 2 Billion	US $7500	US $10,000

If a group is made up exclusively of operations that qualify as "small" or "low intensity managed" forests (Group of "SLIMF"), then FSC allows certification bodies to make some changes to the way they audit, in order to try to reduce costs for such operations. Grants can also help smallholders to finance their certification.

References

- FSC-STD-20-001 V3-0 EN GENERAL REQUIREMENTS FOR FSC ACCREDITED CERTIFICATION
- FSC-STD-01-001 V5-0 EN · FSC Principles and Criteria for Forest Stewardship
- FSC-STD-20-007 (V3-0) EN FOREST MANAGEMENT EVALUATIONS
- FSC-STD-40-004 V2-1 EN FSC Standard for Chain of Custody Certification
- FSC-STD-30-010 V2-0 EN FSC CONTROLLED WOOD STANDARD FOR FOREST MANAGEMENT ENTERPRISES
- FSC-STD-40-005 (V2-1) EN STANDARD FOR COMPANY EVALUATION OF FSC CONTROLLED WOOD.
- FSC-STD-20-001 V3-0 General requirements for FSC accredited certification bodies: application of ISO/IEC Guide 65:1996 (E)
- FSC-STD-20-011 V1-1 EN Accreditation Standard for Chain of Custody Evaluations

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards

<table>
<tr><th colspan="3">GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The voluntary Greenhouse Gas (GHG) Corporate Accounting and Reporting Standard (Corporate Standard) and the Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Value Chain Standard) have been developed by the WRI and WBCSD. Their objective is to provide companies and other organisations with standards and guidance to quantify and publicly report an inventory of GHG emissions associated with a specific product. The role of the GHG Protocol programme is limited to initiating and guiding the development of high quality GHG accounting and reporting protocols and standards, which may be used by regulatory bodies and any other entities interested in GHG accounting and reporting. Compliance with the standards is therefore a function of internal management systems, and the way companies or organisations choose to undertake verification.</td></tr>
<tr><td colspan="2">Advantages</td><td>Drawbacks</td></tr>
<tr><td colspan="2">Initial assessment – There is no specific requirement but the standards provide criteria for GHG reporting and auditing. In particular, the verification can include all the value chain, with verification of data and internal environmental management system.
Intervention of a verifier – In the context of an external communication, an external verification is needed. The Corporate Standard provides guidance on how to select a verifier but there is no requirement for verifiers. The verifier shall be independent of any involvement in the determination of the product inventory or development of any declaration. They shall have no conflicts of interests, so that they can exercise objective and impartial judgment.
Transparency – Principles regarding transparency must be followed.
Invisible characteristics – The GHG protocol is a Scope 3 verification. The assessment shall include data evaluation, methodological evaluation, including information on uncertainties and the list of the persons who have collected the data.
Governance – The initiative is managed by the center for policy research WRI and the WBCSD which is a coalition of 200 international companies.</td><td>Because the role of this programme is limited to initiating and guiding the development of high quality GHG accounting and reporting protocols and standards, there is no specific recommendation regarding the evaluation procedure, the flexibility of the scheme, the validity of the proof of compliance, traceability, and governance.</td></tr>
<tr><td colspan="3">Compliance system set-up</td></tr>
<tr><td>Initial process</td><td colspan="2">There is no formal initial application process. The Protocol provides guidelines for GHG inventory and criteria for GHG reporting and auditing. The GHG Protocol programme Standards are voluntary, but they may be used in mandatory processes, e.g. the EU's IPPC or EPER Directives.</td></tr>
<tr><td>Surveillance</td><td colspan="2">The Corporate Standard and Value Chain Standard includes guidance on verification of the data reported by the company, and requires the organisation to undertake verification in order to be allowed to claim compliance with the Protocol.
No requirement or advice over the verification frequency is provided in the Protocol. However, this will likely be detailed in any mandatory initiatives where regular or random selection reporting is included. According to the Corporate Standard document, the EU-ETS, the World Economic Forum Global GHG Registry and the Australian Greenhouse Challenge programme operate on a random selection basis.</td></tr>
<tr><td>Renewal</td><td colspan="2">There is no renewal procedure or requirement in the GHG Protocol initiative itself. However, other initiatives using the GHG Protocol as a reporting tool may require such renewal.</td></tr>
</table>

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	
Transparency – Availability of information	
Requirements and other information for operators	To be compliant with the Corporate Standard, steps for GHG accounting and reporting, as well as a list of requirements must be followed. This process is detailed in the following document (from page 10): http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf For the Protocol applied to value chains, the process and requirements are different (from page 19): http://www.ghgprotocol.org/files/ghgp/public/Corporate-Value-Chain-Accounting-Reporing-Standard_041613.pdf In addition to these requirements, accounting principles including for example "accuracy" and "transparency" must be followed. They are detailed at (from page 6) http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf The choice of how to present the information under the protocol is free. Nonetheless, a template of reporting form is available for operators: For Corporate Value Chain (scope 3) Accounting: http://www.ghgprotocol.org/files/ghgp/tools/Sample%20Scope%203%20GHG%20Inventory%20Reporting%20Template.pdf For Corporate Accounting: http://www.ghgprotocol.org/files/ghgp/public/GHG-Protocol-Reporting-Template.docx Calculation tools are provided by the GHG Protocol and available at: http://www.ghgprotocol.org/calculation-tools/all-tools Organisations that undertake the steps to become compliant with the standard ultimately need in the process an internal or external independent verification to ensure that there is compliance with the requirements of the Protocol. Internal verification can be used for internal reporting, whereas external verification can be required if the Protocol is used for other GHG programmes. Guidelines are given for this purpose, over: materiality, verification parameters, risk of material discrepancy, site visits, timing of the verification, verifier selection, verification preparation and findings use. However, no information about any verification process is given by the Protocol. More information about the verification guidelines can be found at http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf (from page 68) WRI or WBCSD do not perform external audits nor provide a specific list of verifiers.
Requirements and other information for verifiers	Although the Corporate Standard provides guidance on how to select a verifier, there is no requirement for verifiers. Guidance includes factors to consider during the verifiers' selection: ▪ previous experience and competence in undertaking GHG verification; ▪ understanding of GHG issues including calculation methodologies; ▪ understanding of the company's operations and industry; ▪ objectivity, credibility, and independence. Chapter 10 on "Verification of GHG emissions" of the Corporate Standard provides more detail: http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf. The Value Chain Standard provides almost identical guidance on verifiers, although with specific reference to the needs of a verifier in being able to provide a competent scope 3 GHG inventory: ▪ Assurance expertise and experience using assurance frameworks; ▪ Knowledge and experience in corporate GHG accounting and/or life cycle assessment, including familiarity with key steps in the scope 3 inventory process; ▪ Knowledge of the company's activities and industry sector; ▪ Ability to assess emission sources and the magnitude of potential errors, omissions, and misrepresentations; ▪ Credibility, independence, and professional scepticism to challenge data and information. Chapter 10 on "Assurance" of the Value Chain Standard provides more detail: http://www.ghgprotocol.org/files/ghgp/public/Corporate-Value-Chain-Accounting-Reporing-Standard_041613.pdf

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards	
Registry of compliant products or organisations	A list of corporate and non-corporate users of the Corporate Standard is provided on the WRI GHG Protocol website but it is not clear how up-to-date the list is. The list is available at: http://www.ghgprotocol.org/about-ghgp/users. However, there is no tracking and thus no assurance on whether the mentioned users on the list are in conformance with the Standard.
Complaint and fraud reporting	There is no certificate linked to the compliance with the Protocol and therefore no possible fraud from misuse. Since the Protocol is limited to providing guidance for GHG inventory and reporting, a company that fraud in reporting its GHG emissions following the guidelines of the Protocol is not of relevance for the WRI itself, which therefore does not track this type of frauds. There is no information over complaints publicly available on the WRI website. The Protocol provides quite broad guidelines and criteria and for free, thus the probability of complaint from users is very low.
Traceability	
Record-keeping requirements	The Standard requires the users to comply with the "Transparency" accounting principle, which relates to the degree to which information on the processes, procedures, assumptions, and limitations of the GHG inventory is disclosed in a clear, factual, neutral, and understandable manner based on clear documentation and archives (i.e., an audit trail). The Protocol emphasises that "high quality, transparent documentation is particularly important to credibility." http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf (pages 9 and 50) The public GHG emissions report that is in accordance with the GHG Protocol Corporate Standard shall include specific information (from page 63 of http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf).
Management of invisible characteristics	For invisible impacts such as the quality system or the source of energy, the verification is based on documentation such as a report from internal audit. Otherwise, the requirements are not detailed. For example, the standard recommends "information on uncertainties, qualitative and if available qualitative" without mentioning other precision.
Governance	
Process for developing the compliance system	No formal compliance system (beyond guidance) is built in to the GHG Protocol, so none has been formally developed. The protocol insists on the very first requirement of defining business goals prior to conducting product GHG inventories (from page 10 - http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf).
Process for updating the compliance system	There is no built-in compliance system, so no formal process for updating a system as such. However, this does not preclude the development of guidance on "assurance" (as verification is referred to in the Standard). Setting a reduction target and tracking inventory changes over time is not required to claim conformance with the Product Standard. However, if companies choose to set a reduction target, they must "complete and disclose an updated inventory report including the updated results, the base inventory results, and the context for significant changes".
Control of verifiers/certifiers (if relevant)	The GHG Protocol does not certify verifiers nor outline certification requirements. It does however specify the need for verification, which is proposed to be completed by first- or (preferably) third-party verifiers.
Cost of the compliance	
As no compliance system is built in the Protocol initiative or any of its standards, there is no compliance cost formally linked to the initiative. The cost of compliance is associated with the standard cost of operational emissions verification, borne by the entity in question. Its cost would be very dependent on the complexity of the verification scope, the number of sources to be verified, and the availability of data. Cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving. Additional verification of data may be required in instances where an entity fails to demonstrate that emissions data has been sufficiently monitored.	

GHG Protocol – "Corporate" and "Corporate Value Chain (Scope 3)" Accounting and Reporting Standards
References
▪ WRI(2004), A Corporate Accounting and Reporting Standard URL: http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf ▪ WRI (2011), Corporate Value Chain (Scope 3) Accounting and Reporting Standard URL: http://www.ghgprotocol.org/files/ghgp/public/Corporate-Value-Chain-Accounting-Reporing-Standard_041613.pdf ▪ http://www.ghgprotocol.org/about-ghgp/users

GHG Protocol – Product Life Cycle Accounting and Reporting Standard

<table>
<tr><th colspan="3">GHG Protocol – Product Life Cycle Accounting and Reporting Standard</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The voluntary-based Greenhouse Gas (GHG) Product Life Cycle Accounting and Reporting Standard Protocol has been developed by the WRI and WBCSD with the objective of providing companies and other organisations with standards and guidance to quantify and publicly report an inventory of GHG emissions associated with a specific product. Guidelines over data verification by an internal or external party are provided as well.
The objective of the Protocol is therefore to help GHG verification become more uniform, credible, and widely accepted.
The Protocol is not a verification standard, however, it provides guidelines on how to develop the inventory in order to make it more amenable to verification.</td></tr>
<tr><td colspan="2">Advantages</td><td>Drawbacks</td></tr>
<tr><td colspan="2">Initial assessment – There is no specific requirement but the standards provide criteria for GHG reporting and auditing. In particular, the verification concerns the entire life cycle, with verification of data and internal environmental management system.
Intervention of a verifier – In the context of an external communication, an external verification is needed. The Corporate Standard provides guidance on how to select a verifier but there is no requirement for verifiers. The verifier shall be independent of any involvement in the determination of the product inventory or development of any declaration. They shall have no conflicts of interests, so that they can exercise objective and impartial judgment.
Transparency – Principles regarding transparency must be followed
Governance – The initiative is managed by the WRI and the WBCSD which is a coalition of 200 international companies.</td><td>Invisible characteristics – emissions such as energy emissions are verified. The verification is based on documentation, in particular report from internal audit for example. The assessment shall include data evaluation, methodological evaluation, including information on uncertainties and the list of the persons who have collected the data.

Because the role of this programme is limited to initiating and guiding the development of high quality GHG accounting and reporting protocols and standards, there is no specific recommendation regarding the evaluation procedure, the flexibility of the scheme, the validity of the proof of compliance, traceability, and governance.</td></tr>
<tr><td colspan="3">Compliance system set-up</td></tr>
<tr><td>Initial process</td><td colspan="2">There is no formal application process. Organisations may undertake the steps to become compliant with the standard on a voluntary basis. To be compliant with this standard, an assessment on the basis of internal or external independent verification is needed to ensure that there is compliance with the requirements of the Protocol. Given that uptake of the standards is voluntary, verification is not undertaken by regulatory authorities.</td></tr>
<tr><td>Surveillance</td><td colspan="2">The GHG Protocol Product Protocol includes verification standards that should be performed by an internal or external party. However, the Protocol does not give any information about the frequency of the controls.
Typically, the companies that comply with the ISO 14064 accreditation standards undertake verification.
Given that the uptake of the standard is voluntary, there are no fines or regulatory infractions associated with non-compliance.</td></tr>
<tr><td>Renewal</td><td colspan="2">There is no renewal procedure or requirement in the GHG Protocol initiative itself. However, other initiatives using the GHG Protocol as a reporting tool may require such renewal.</td></tr>
</table>

GHG Protocol – Product Life Cycle Accounting and Reporting Standard	
Transparency – Availability of information	
Requirements and other information for operators	To be compliant with the Corporate Standard, steps for GHG accounting and reporting, as well as a list of requirements must be followed. Details for each of the steps are available at: http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf (from page 13). In addition to these requirements, accounting principles including for example "accuracy" and "transparency" must be followed. They are detailed at:http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf (page 19) The choice of how to present the information under the protocol is free. Nonetheless, a template of reporting form is available for operators: http://www.ghgprotocol.org/files/ghgp/tools/Sample%20Product%20Standard%20GHG%20Inventory%20Reporting%20Template.pdf Calculation tools are provided by the GHG Protocol and available at: http://www.ghgprotocol.org/calculation-tools/all-tools Product compliance with the Protocol ultimately needs an internal or external independent verification in the process. Guidelines are given for this purpose, over: materiality, verification parameters, risk of material discrepancy, timing of the verification, verifier selection, verification preparation and findings use. However, no information about any verification process is given by the Protocol. More information about the verification guidelines can be found at: http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf (from page 93). WRI or WBCSD do not perform external audits nor provide any specific list of verifiers.
Requirements and other information for verifiers	There are no specific requirements for verifiers (called "assurers" in the Standard). Chapter 12 on Assurance in the Standard sets out the competencies of the assurers: "A competent GHG inventory assurer has: ▪ Assurance expertise and experience using assurance frameworks ▪ Knowledge and experience in life cycle assessment and/or GHG corporate accounting, as well as familiarity with key steps in the product inventory process ▪ Knowledge of the company's activities and industry sector ▪ Ability to assess the emission sources and the magnitude of potential errors, omissions and misrepresentations ▪ Credibility, independence and professional scepticism to challenge data and information" ▪ General recommendations are also provided to the audited organisation such as ensuring that: ▪ First- and third-party assurers follow similar procedures and processes; ▪ the GHG inventory assurer has knowledge and experience in life cycle assessment and/or GHG corporate accounting; Refer to (pages 93 to 95) http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf for additional details.
Registry of compliant products or organisations	There is no publication of the companies using the GHG Protocol. Only users of the Corporate Standard Protocol are listed (http://www.ghgprotocol.org/about-ghgp/users), but with no assurance about whether these mentioned users on the list are in conformance with the standard and if the list is up-to-date.
Complaint and fraud reporting	There is no certificate linked to the compliance with the Protocol and therefore no possible fraud from misuse. Since the Protocol is limited to providing guidance for GHG inventory and reporting, a company that fraud in reporting its GHG emissions following the guidelines of the Protocol is not of relevance for the WRI itself, which therefore does not track this type of frauds. There is no information over complaints publicly available on the WRI website. The Protocol provides quite broad guidelines and criteria and for free, thus the probability of complaint from users is very low.

GHG Protocol – Product Life Cycle Accounting and Reporting Standard	
Traceability	
Record keeping requirements	According to the standard, organisations must develop a data management plan early in the inventory process and document the data collection and assessment processes as they are completed, in order to ensure that all the relevant information is documented. Detailed guidance on how to create and implement a data management plan is given, and the minimum elements of the data management plan are: ▪ Description of the studied product, unit of analysis, and reference flow ▪ Information on the entity(ies) or person(s) responsible for measurement and data collection procedures ▪ All information that describes the product's inventory boundary ▪ Criteria used to determine when a product inventory is re-evaluated ▪ Data collection procedures ▪ Data sources, including activity data, emission factors and other data, and the results of any data quality assessment performed ▪ Calculation methodologies, including unit conversions and data aggregation ▪ Length of time the data should be archived ▪ Data transmission, storage, and backup procedures ▪ All QA/QC procedures for data collection, input and handling activities, data documentation, and emissions calculations See (appendix C): http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf Moreover, the standard requires that the organisation addresses and documents all relevant issues in a factual and coherent manner, discloses any relevant assumptions and makes appropriate references to the methodologies and data sources used in the inventory report, and clearly explains any estimates made. A public GHG emissions report that is in accordance with the GHG Protocol Standard must include specific information on general information and scope, boundary setting, allocation, data collection and quality, uncertainty, inventory results, assurance, and setting reduction targets and tracking inventory changes (from page 101 of http://www.ghgprotocol.org/files/ghgp/public/ghg-protocol-revised.pdf).
Management of invisible characteristics	The requirements/recommendations regarding the verification mostly concern the verification of non-invisible impacts (raw material consumption, process, etc.). For invisible impacts such as the quality system, the verification is based on documentation such as a report from internal audit. Otherwise, the requirements are not detailed. For example, the standard recommends "information on uncertainties, qualitative and if available qualitative" without mentioning other precision.
Governance	
Process for developing the compliance system	The process has already been partly presented under "Guidance and requirements for operators". There is no compliance system built into this initiative, apart from general guidance provided in the main Standard document. The Protocol insists on the very first requirement of defining business goals prior to conducting product GHG inventories (from page 9 - http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf).
Process for updating the compliance system	There is no built-in compliance system, so no formal process for updating a system as such. However, this does not preclude the development of guidance on "assurance" (as verification is called in the Standard). Setting a reduction target and tracking inventory changes over time is not required to claim conformance with the Product Standard. However, if companies choose to set a reduction target, they must "complete and disclose an updated inventory report including the updated results, the base inventory results, and the context for significant changes".
Control of verifiers	The GHG Protocol does not certify verifiers nor outline certification requirements but it does specify the need for verification, whether completed by first- or third-party "assurers".

GHG Protocol – Product Life Cycle Accounting and Reporting Standard
Cost of the compliance
There is no compliance system built into the initiative, apart from the proposed "assurance" (verification) provided through guidance in the Standard. Hence costs are associated with the standard cost of operational emissions verification. The cost would be very depending on the complexity of the verification scope (i.e. complexity of the product whose carbon footprint is being evaluated), the number of data sources being verified and the overall availability of data. Cost of verification can increase in cases where internal management systems are poor, often resulting in substandard data archiving.
References
▪ WRI (2011), Product Life Cycle Accounting and Reporting Standard URL: http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf ▪ http://www.ghgprotocol.org/about-ghgp/users

Global Organic Textile Standard (GOTS)

<table>
<tr><th colspan="3">Global Organic Textile Standard</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The Global Organic Textile Standard (GOTS) is a voluntary certification scheme for textile products that are made from organic fibres. It includes both environmental and social criteria, along the entire organic textile supply chain.
The standard defines two label grades:
▪ Label grade 1: "organic", which ensures that at least 95% of the fibres used are organic fibres
▪ Label grade 2: "made with X% organic". To get this label, at least 70% of the fibres need to be certified organic fibres and synthetic fibres cannot exceed 10% of the total fibres in the garment (25% for socks, leggings and sportswear).
The GOTS certification targets textile processing, manufacturing and trading entities, but not organic fibre producers (who can apply for certification to organic farming standards like the USDA NOP or the EEC 834/2007).</td></tr>
<tr><th colspan="2">Advantages</th><th>Drawbacks</th></tr>
<tr><td colspan="2">Initial assessment – The initial audit includes on-site visit, interview of workers, and tests. The verification concerns the product, the organisations involved, and the value chain.
Surveillance – Compliance monitoring is ensured by annual on-site inspections of processors, manufacturers, and traders performed by independent accredited bodies.
Intervention of a verifier – Verification activities are carried out by accredited certification bodies.
Flexibility – The label grades are available "organic" and "made with x% of organic". The cost of certification depends on a wide range of factors including the location, size and type of entity, and the type of product.
Transparency – The standards and certification criteria, the certified entities and some cases of complaints and their resolution are available.
Traceability – The inspection includes tracing back whether all the purchased products with GOTS certification claim are correctly certified. Certified entities receive a "scope certificate" that lists the certified products/product categories (and the production stages) that are in compliance. The supplier must also provide a "transaction certificate". In order for a product to obtain a GOTS certification, all its providers must have a GOTS conformity certificate (scope certificate).
Invisible characteristics – Invisible impacts such as social aspect are verified through interviews with management and unions/stakeholders, confidential interviews with workers, revision of documents, on-site inspections, etc.
Consequences of non-compliance/misuse – In case of non-compliance, the certification is not delivered. IWG investigates unauthorised, false or misleading use of the GOTS logo and other claims related to GOTS certification on product declarations. If necessary, it takes legal actions (e.g., banning the company from getting the GOTS label for two years) against incorrect use of the GOTS label or disseminates information about it.
Governance – Standard are developed through a multi-stakeholder process by organic cotton producers, the textile industry, consumers, standard organisations, and certifiers from different countries and regularly revised.
Recognition – The label is widespread and widely recognised by consumers. In 2012, it had been granted to 3,016 entities (increase of 11% with respect to 2011).</td><td>Validity of the proof of compliance – The certificate remains indefinitely valid.
Flexibility – the standards and verification procedure are similar for all companies.
Traceability – there is no requirements regarding the period during which the records have to be kept.</td></tr>
</table>

Global Organic Textile Standard	
Compliance system set-up	
Initial process	**Requirements to get the GOTS certificate:** ▪ All chemical inputs used in the garment manufacturing and processing need to meet the established environmental and toxicological criteria; ▪ The choice of accessories is limited (e.g. PVC is not allowed, nickel or chrome is permitted, polyester is allowed only if it is recycled); ▪ An external or internal functional wastewater treatment plant needs to be in place for any wet-processing unit involved; ▪ All certified companies must comply with minimum social criteria. In order for a product to obtain a GOTS certification, all its providers must have a GOTS conformity certificate (scope certificate). With the completion of GOTS certification by an approved certifier, the certified entity acquires a sub-licence that entitles it to participate in the GOTS programme, including the use of the standard and the GOTS logo on its respective GOTS goods. Certified entities, traders, brand holders and retailers who intend to get products labelled in accordance with GOTS and/or to sell labelled products (with the GOTS logo) need to contact their applicable GOTS certifier to receive the applicable logo files and for final approval of their labelling application. **Compliance is ensured by professional auditors.** The GOTS certifiers need to ensure that companies with the GOTS certificate comply with all criteria established by the standard. The inspection methods may include (but are not limited to) the following activities: review of bookkeeping in order to verify flows of GOTS goods (input/output reconciliation, mass balance calculation and tracing back lots and shipments); visits to facilities to check the processing and storage system; assessment of the separation and identification system and identification of areas of risk to organic integrity; inspection of the chemical inputs (dyes and auxiliaries) and accessories used and assessment of their compliance with the GOTS criteria; inspection of the waste water (pre-)treatment system of wet processors and assessment of its performance; check on minimum social criteria (sources of information are interviews with management and unions/stakeholders, confidential interviews with workers, revision of documents, on-site inspections); verification of the operator's risk assessment of contamination and residue testing policy, potentially including sample drawing for residue testing either as random sampling or in case of suspicion of contamination or non-compliance.
Initial process	In order to become GOTS certifiers, auditors need to apply to the IWG[128] and to be accredited. Certifiers may be accredited to certify distinct scope of activities (e.g. mechanical textile processing or wet processing). Currently, there are 16 approved GOTS certification bodies. The list of the approved certification bodies is available at: http://www.global-standard.org/certification/approved-certification-bodies.html. The certificate remains indefinitely valid but certified operators are assessed every year.
Surveillance	Compliance monitoring is ensured by annual on-site inspections of processors, manufacturers and traders performed by independent accredited bodies. The certification bodies assess all used inputs and accessories, verify wastewater treatment systems and residue policy, and ensure compliance with minimum social criteria. Traders' certification is based on the verification of their product flow documentation, reconciliation of purchase and sale volumes of organic textiles (mass balance calculation) and verification of the GOTS certification of all products that are purchased with a GOTS certificate.
Renewal	No specific procedure for renewal (certificates remain indefinitely valid)
Transparency – Availability of information	
Requirements and other information for operators	The Global Organic Textile Standard Version 3.0 is available at: http://www.global-standard.org/the-standard.html. The certification process is explained at: http://www.global-standard.org/certification/how-to-become-certified.html The indicators to be used are detailed at: http://www.global-standard.org/the-standard/general-description.html

[128] The International Working Group on Global Organic Textile (IWG) is the key committee for all relevant structural and political issues related to the Global Organic Textile Standard programme

Global Organic Textile Standard	
Requirements and other information for verifiers	The manual for the implementation of the GOTS, which provides interpretations and clarifications for specific criteria of the GOTS, can be found at http://www.global-standard.org/the-standard/manual-for-implementation.html. It targets both approved certifiers and users of the GOTS. The certificate templates can be found at http://www.global-standard.org/certification/certificatetemplates.html along with policy documents providing mandatory instructions and notes to be followed by certification bodies when issuing certificates.
Registry of compliant products or organisations	The GOTS has a public database with information on certified entities and the specifications of their certified products. The database is available at: http://www.global-standard.org/public-database.html.
Complaint and fraud reporting	IWG investigates unauthorised, false or misleading use of the GOTS logo and other claims related to GOTS certification on product declarations. If necessary, it takes legal actions against incorrect use of the GOTS label or disseminates information about it. As a result of these surveillance activities, IWG became aware that a Chinese company, Anhui Skyworth Co Ltd, forged a GOTS label[129] and that the company Greenbuds used the GOTS label for baby mattress and bedding products before getting it[130]. In the latter case, IWG banned the company from getting the GOTS label for two years. IWG developed a complaint procedure to address complaints regarding: ▪ unauthorised, false or misleading use of the GOTS logo or other claims related to GOTS certification; ▪ failures or omissions in the course of the GOTS certification procedure; ▪ any other abuses of the GOTS quality assurance or the licensing and labelling system; and ▪ violations against the ownership and other rights of/in the Global Organic Textile Standard. A complaint form can be found at http://www.global-standard.org/licensing-and-labelling/complaintprocedure.html.

[129] http://www.fibre2fashion.com/news/textile-news/newsdetails.aspx?news_id=97545

[130] http://www.global-standard.org/information-centre/news.html; http://oneco.biofach.de/en/news/gots-working-group-bans-greenbuds--focus--dbf9c9c0-f12e-4245-9b60-89b14990629f/

Global Organic Textile Standard	
Traceability	
Record-keeping requirements	**Requirements for the operators** Operators must have a written environmental policy, which should include, inter alia, procedures such as how to monitor and minimise waste and discharges. Operators also need to have a programme for improvement. Wet processing units must keep full records of the use of chemicals, energy, water consumption and wastewater treatment, including the disposal of sludge. The certification of traders is mainly based on the verification of their product flow documentation. The inspection protocol includes reconciliation on purchase and sales volumes of organic textiles (mass balance calculation) and tracing back whether all the purchased products with GOTS certification claim are correctly certified. **Requirements for verifiers** The certified entity must keep full records for each client that receives GOTS goods, including the lists of all products, their specifications and quantities. It must also make this information available for inspection by the approved certifier. The inspection protocol includes tracing the organic fibre product flow, assessment of all inputs, accessories used, verification of the wastewater treatment system as part of the environmental management, monitoring minimum social criteria and implementing risk assessment based residue policy. **Handling of certificates** All the operators of the processing and manufacturing chain, as well as business-to-business traders must be GOTS-certified as a prerequisite to be allowed to sell a GOTS-certified product. There are two types of certificates to manage GOTS-certified products: ▪ Scope Certificates (i.e. Certificates of Compliance) – Processors, manufacturers and traders that have demonstrated their ability to comply with the relevant GOTS criteria receive a GOTS scope certificate that lists the certified products or product categories (and the production stages) that are in compliance. ▪ Transaction Certificates – Scope Certificates are not a proof that specific shipments from this company are GOTS certified. In order to assure that a specific shipment of products received by a certified entity is GOTS certified the buyer can ask the certified supplier to provide a Transaction Certificate (TC). This certificate is issued by the GOTS certifier of the supplier and lists the concrete products and shipment details including the buyers name and address and confirms the GOTS certification status of the shipped GOTS.
Management of invisible characteristics	The verification of aspects such as social aspects is performed through documentation evaluation, interviews, in particular confidential interview with workers. For environmental management, the verification is based on the environmental policy report which include the person responsible, the targets goals and procedures to reduce energy and water consumption, waste, etc. and their monitoring. There is no process for verifying the real application of the information contained in the environmental policy report.
Governance	
Process for developing the compliance system	The development of GOTS began with a workshop in the Intercot Conference in 2002, where representatives from organic cotton producers, the textile industry, consumers, standard organisations, and certifiers discussed the need for a harmonised organic textile standard. This workshop resulted in the formation of the IGW. IGW includes four organisations: OTA (USA), IVN (Germany), Soil Association (UK) and JOCA (Japan). In 2005, the four organisations agreed on the first version of the GOTS, and on its implementation scheme. The first GOTS version was published in 2006. Version 2 was published in 2008; Version 3 in 2011.

Global Organic Textile Standard	
Process for updating the compliance system	Standard revisions are carried out approximately every three years. The last revision process took place in 2011 and the next one started in 2013. The release of GOTS Version 4.0 is expected for March 2014. The revision process includes a multi-stakeholder input procedure. The IWG, the Technical Committee and the Certifier Council as well as invited stakeholders with expertise in the field of organic textile (textile production, textile processing, textile chemistry and social criteria) are involved ▪ The Technical Committee is in charge to generate revisions of the standard, issue interpretation documents, to develop the quality assurance system and to supervise its implementation. ▪ All certification entities participate in the Certifiers Council, which has an advisory function and reports to the Technical Committee. The Council ensures a consistent interpretation of the GOTS criteria and quality assurance system. ▪ International stakeholders organisations represent the industry, NGOs and consumers. When the standard changes, the products that are already certified retain their certification. However, any new certification must be based on the updated standard no later than twelve months after its release, unless other advice is given.
Control of verifiers	Accreditation is conducted by a recognised accreditation body, such as the International Organic Accreditation Services (IOAS), which specialises in organic accreditation and operates worldwide. When an entity applies to become a certification body, IWG carries out an accreditation audit to its main office and a witness audit performed at a textile-manufacturing mill for the initially applying Certification Body. Afterwards, IWG performs a continuous monitoring of approved GOTS Certification Bodies, which entails at least one accreditation visit every second year and one witness or review audit every second year of granted accreditation.
Cost of the compliance	
The cost of certification for companies depends on a wide range of factors including the location, size and type of entity, and the type of product. In general, IWG estimates that the annual certification cost to be paid to certifiers range between €1,200 and €3,000 for companies with only one facility. In addition, companies need to pay an annual license fee of €120 for each certified facility to IWG. This fee covers the right to use the GOTS logo on certified textile products.	
References	
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GS Mark

GS Mark	
Key messages	
Nature of the scheme	The GS Mark is a voluntary label that aims to verify the security of technical products and consumer products. It can be seen as a consumer product safety mark. It is used as market differentiation instrument.

Advantages	Drawbacks
Initial assessment – The initial assessment includes test and on-site inspection. **Surveillance –** Surveillance activities are performed annually. They consist in audits in the manufacturing units including control of production conditions, inspection, tests on products. **Intervention of a verifier –** Factory inspections can be performed by the body in charge of the certification, or by an authorised factory inspection body or a third party body sub-contracted by the certification body. **Validity of the proof of compliance –** The certification is valid for a predetermined period of 5 years. **Transparency –** The standard, the GS bodies, the general certification rules, and the withdrawals are publicly available (for the latter on the GS certification bodies' website). **Traceability –** The license holder must keep a record of any complaints linked with the conformity of its products. The notified body must keep at least ten years the documents relative to testing and certification, after expiration of the validity period of the certificates concerned. **Invisible characteristics** – The quality system is review through documentation and on-site visit **Consequences of non-compliance/misuse –** In case of misuse, a verifier can perform an on-site visit or carry out tests or even successive controls. In case of minor non-conformities corrective measures have to be taken. The degree of gravity of the non-conformities determines the time in which the manufacturer has to correct them (up to two months). Sanctions, decided by the certification body, are possible if the corrective actions are not implemented or not efficient. In case of serious defects impacting safety, improvements are required within one week. If the actions are not implemented or efficient, the certificate is withdrawn and the product removed from the market. **Governance –** The standards and verification process are developed by the Ministry of Labour and Social Affairs. **Recognition –** The label is well known in particular in Germany. In 2011, 60 000 licenses GS-Mark had been issued.	**Surveillance –** At the end of the validity period, the certificate can be renewed once without new tests. If this allows flexibility, it can be a source of misuse **Flexibility –** The standard is similar for every product. The certification cost depends on the certification body and the product type. The type of company is not taken into account. **Transparency –** The complaints or the certification criteria are not public. **Governance –** The standards and verification process are developed by the Ministry of Labour and Social Affairs. However, no further precision on the process is available.

GS Mark	
Compliance system set-up	
Initial process	The general procedure of the certification process is as follow: ▪ **1. Request –** The applicant (i.e. the entity who puts the product on the market) contacts a certification body. The certification body then provides information on the applicable standards for the product. The applicant must ensure that its products comply with the relevant standards and prepares a technical file and by doing so, tests can be performed. The applicant can carry out these tests or have them performed by laboratories recognised by ZLS. Then, the applicant fills the application form and sends the technical file of its product to the certification body. ▪ **2. Documentation review –** The certification body examines the product characteristics, the conditions of presentation of the product on the market (future position of the GS mark on the product, warning messages, etc.) and the technical file. The certification body also verifies that the notices as well as user and installation manuals are written in German. At the end of the review, the body prepares a report. ▪ **3. Initial visit –** The certification body performs a visit in the manufacturing factory to be sure that the general organisation, the means of production and control, and the organisation of the quality guarantee the maintenance in conformity of the products to the requirements. Factory inspections can be performed by the body in charge of the certification, or by an authorised factory inspection body or a third party body subcontracted by the notified body. During the visit, the body can take samples of products for further tests. At the end of the audit, the certification body draws up a report. ▪ **4. Certification –** Based on the audit report, the review report and the testing report, all given to the applicant, the internal decision committee of the certification body grants the right to use the mark. The certificate is valid five years and can be limited to a batch of products. When there are several manufacturing units within the same company, the benefit of the GS Mark is granted individually to each unit, even if the concerned products are identical. The mark is affixed on the products and guaranteed by the certificate delivered to the licence holder.
Surveillance	For the first certification, the surveillance activities are annual. They consist in audits in the manufacturing units including control of production conditions, inspection, tests on products. If sub-components are pre-assembled in other manufacturing units, without control upon reception of these sub-components, the certification body must perform surveillance activities of the production of these sub-components. In case of suspicion of misuse (i.e. complaints, dispute, etc.), the certification body can perform on-site visits or carry out tests on a batch of products. The certification body can also perform four successive controls, And if these four controls do not reveal non-conformities, the frequency of inspection returns to annual. In case of small defects, the manufacturer has to implement corrective actions that will be controlled during the next inspection. In case of serious defects, the corrections actions must be implemented within two months. Sanctions, decided by the certification body, are possible if the corrective actions are not implemented or not efficient. In case of serious defects impacting safety, improvements are required within one week. If the actions are not implemented or efficient, the certificate is withdrawn and the product removed from the market.
Renewal	At the end of the validity period, the certificate can be renewed once without new tests being carried out if the products, the reference documents and the condition of production have not changed. Nonetheless, the renewal requires the issuance of a new authorisation to use the mark.
Transparency – Availability of information	
Requirements and other information for operators	The products must comply with the Product safety Act, which is publicly available and other requirements that are not available. General certification rules are available on the websites of some authorised GS bodies. Nonetheless, the detailed procedure and the tests procedure are not publicly available. As a result, the GS mark is used as a differentiation label. The list of authorised GS bodies that award the GS mark is available at: http://www.baua.de/de/Produktsicherheit/Pruefstellenverzeichnisse/Kontrolle-GS-Zertifikate/Suche%20nach%20GS-Pr%C3%BCfstellen/GS-Pr%C3%BCfstellen.html
Requirements and other information for verifiers	General certification rules are available on the websites of some authorised GS bodies such as LCIE (http://www.lcie.fr/medias/gs-referentiel-en.pdf) or LNE (http://www.lne.fr/fr/certification/reglements/regles_generales_marque_gs.pdf). The detailed procedure is not publicly available.

GS Mark	
Registry of compliant products or organisations	GS certification bodies can have a publicly available database of the GS certificates they have issued. For instance, the registry of GS certificates issued by LNE is available at: https://www.lne.fr/recherche-certificats/accueil?lang=EN&prov=LNE
Complaint and fraud reporting	The certificate withdrawal is made publicly available on the GS certification bodies' website and transmitted to German authorities and other GS certification bodies. For instance, TÜV Rheinland has a "black list" of cases of misuse of GS certification mark (products that are marked illegally with the GS mark) http://www.tuv.com/en/corporate/business_customers/product_testing_3/blacklist.html The procedure for complaints management is briefly explained in the general certification rules available on some certification bodies' websites. For example, when LCIE receives complaints, control can be performed, including tests on sample during which the licence holder has to be present. The licence holder must take measures following a complaint.
Traceability	
Record-keeping requirements	The document used for granting the GS mark must allow identifying the product and its components unambiguously (by photos, drawings, list of parts, etc.). The licence holder must keep a record of any complaints linked with the conformity of its products. He must take appropriate measures and document them. The notified body must keep at least ten years the documents relative to testing and certification, after expiration of the validity period of the certificates concerned.
Management of invisible characteristics	Regarding embedded impacts, only quality system is evaluated. There is no specific mention on the mean to evaluate embedded impacts and moreover the guide for certifiers is not publicly available.
Governance	
Process for developing the compliance system	The development and update of the certification systems is managed by the German Federal Ministry of Labour and Social Affairs (BMAS). Information on the process is not publicly available.
Process for updating the compliance system	The development and update of the certification systems is managed by the German Federal Ministry of Labour and Social Affairs (BMAS). Information on the process is not publicly available.
Control of verifiers	The control bodies and the eventual partner laboratories must be authorised by the ZLS. The accreditation body may control the certification body and review the documents used for granting the mark.
Cost of the compliance	
▪ The detailed cost of certification is not publicly available. One anecdotal evidence found is indicative information from 2007 that mentions average costs for a GS test of €3000-5000 (type of costs covered not specified); these are deemed insignificant compared to overall production costs (VdTÜV website, see link below). Each tariff depends on the certification body and on the product type. The certification costs include: Admissions fees ▪ Cost for tests and audits (including for surveillance). The translation review of the installation and use manuals in German language can also be included. ▪ Cost for the management of the certification: issue of the certificate and follow up of the file ▪ Cost for the mark management, including promotion in and outside Europe. ▪ Each case of non-compliance could result in an administrative fine of up to €100,000.	

GS Mark
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International Fairtrade Certification Mark

International Fairtrade Certification Mark		
Key messages		
Nature of the scheme	The Fairtrade mark relies on a certification system to ensure that the conditions of production and trade of products are socially and economically fair as well as environmentally responsible. The Mark can be used as a label on product packaging.	
Advantages		**Drawbacks**
Initial assessment – The verification concerns both products' organisation and value chain. The initial audit includes on-site audit and random checks at farm level. For organisations, the standards promote progress through specific criteria. **Surveillance –** A surveillance audit is performed annually. The frequency of surveillance activities can be decreased if excellent compliance has been demonstrated over the years. **Intervention of a verifier –** The initial audits and the surveillance is performed by FLO-CERT GmbH, itself accredited by DAkkS (German National Accreditation Body). **Validity of the proof of compliance –** After three years (six years for Small Licensees), an on-site renewal audit has to be performed. **Flexibility –** The certification scheme is adapted to organisation's capacity, i.e. on the type of organisation (producers or traders), the status and the size of the organization and the type of products. For example, physical separation is not mandatory for products categories for which an enforced physical traceability compromises the aim to maximise the benefits to producers. The cost also depends on the type of operator, the number of products, etc. **Transparency –** High transparency of the requirements, the certification process, the documentation to provide, the costs, the misuse and the complaints. **Traceability –** A check list of the documentation the operator must provide is indicated. Moreover, operators must separate physically the fair-trade products except for cocoa, cane sugar, fruit juice and tea for which this is advisable but not compulsory (see flexibility criteria). The methods for demonstrating physical traceability is at the discretion of the operator, whereas for other products, the documentation must allow the certification body to track the products. **Invisible characteristics –** The auditor inspects samples of farmers (in the case of producer group), uses interviews of stakeholders and documentation. **Governance –** The standards are elaborated by FLO-CERT and submitted to stakeholders who usually include producers, Producer Networks, suppliers, retailers, other units within Fairtrade International, FLO-CERT and Labelling Initiatives. Moreover, once a year, the quality management system is evaluated on aspects such as the performance of verification, the results of internal audits and the complaints. If relevant, the compliance system can be revised every two years. **Recognition –** The label is known at international level by consumers as well as by the others actors of the value chain.	**Flexibility –** The fact that standards are specific to the activities can lead to non-homogeneous qualities between products **Consequences of non-compliance/misuse –** Before the delivery of the certification, non-conformities must be corrected within 9 months. The consequence of misuse is not clearly mentioned but may induce the withdrawal of the certificate.

International Fairtrade Certification Mark	
Compliance system set-up	
Initial process	▪ **1. Application process –** The applicant fills in an application questionnaire to formally request a Fairtrade product certification from FLO-CERT. Based on this questionnaire, FLO-CERT evaluates the theoretical certifiability of the applicant. If the application is accepted, the applicant receives the information necessary to perform the certification process. For trade organisations, a Permission to Trade letter, valid 9 months, is issued. ▪ **2. Initial audit –** An auditor from FLO-CERT performs an initial on-site inspection. For producer organisations, random checks of a representative sample of farmers are also performed. The operator is evaluated regarding a list of criteria. Small Producer Organizations and contract Production also have development criteria, which are evaluated according five performance ranks. The compliance of the operator is measured based on the average score achieved. ▪ **3. Evaluation –** After the audit, a report and the score of the applicant for each compliance criteria is sent to FLO-CERT for evaluation. The decision to certify is taken by a certifier who was not involved in the inspection or evaluation process. In cases of non-compliance, FLO-CERT suggests measures to the applicant to correct the non-conformities and evaluate their implementation. Regarding producer organisations, a Permission to Trade letter (valid 9 months) is issued (if no major non-conformities are detected) in order to start Fairtrade transactions, ▪ **4. Certification –** Once the non-conformities are fixed (within 9 months), the audited organisation receives a certificate, and this certificate is valid four years. For small licensees, the compliance cycle lasts six years where they do not receive a certificate, but instead they get two Permission to Trade letters the first six-year period (each lasting three years). They finally receive their certificate, which is valid six years, at the beginning of the second compliance cycle.
Surveillance	At least one surveillance audit per year is carried out to evaluate continued compliance. For small licensees, the surveillance audit is performed the third year. In some circumstances, where organisations have demonstrated excellent compliance over many years, they may qualify for a off-site "desktop" review as part of a three-year inspection cycle. After three years, an on-site renewal audit has to be performed.
Renewal	After three years (six years for Small Licensees), an on-site renewal audit has to be performed.
Transparency – Availability of information	
Requirements and other information for operators	The audited organisations have to comply with the standards of FLO-CERT: http://www.fairtrade.net/our_standards.html FLO has a set of generic standards related to production and trade: ▪ Production standards are based on initial requirements and progress requirements. There are standards for small producers' organisations, for hired labour and for contract production. ▪ Trade standards certify the trading relationship between the certified producers, the possible intermediary operators (who have to pay registration fees), and the licenses (who pay a license to the national fair-trade initiative to use the mark); ▪ Additional standards apply to specific products and types of producer. Compliance Criteria are established by FLO-CERT to translate requirements of the Fairtrade Standards and FLO-CERT certification policies into verifiable control points that are evaluated during the certification process to verify compliance with the Fairtrade Standards. Compliance criteria documents are available at: http://www.flo-cert.net/flo-cert/37.html. The certification process is explained at: http://www.flo-cert.net/flo-cert/34.html. Compliance Criteria are established by FLO-CERT to translate requirements of the Fairtrade Standards and FLO-CERT certification policies into verifiable control points that are evaluated during the certification process to verify compliance with the Fairtrade Standards. Compliance criteria documents are available at: http://www.flo-cert.net/flo-cert/37.html A quality manual – providing general explanations on how certificates are controlled – is also available at: http://www.flo-cert.net/flo-cert/fileadmin/user_upload/quality/QM_QualityManual_ED_54_public.pdf
Requirements and other information for verifiers	FLO-CERT follows the ISO 65 norm in all certification operations. FLO-CERT uses a certification system called SCORE based on compliance criteria and 5 levels of compliance ranks for each criterion. Explanations on SCORE are available at: http://www.flo-cert.net/flo-cert/fileadmin/user_upload/certification/score/CERT_SCORECertificationModel_ED_11_en.pdf.

International Fairtrade Certification Mark	
Registry of compliant products or organisations	FLO-CERT also has a database of all the fairtrade-certified organisations by product and region. The database is available at: http://www.flo-cert.net/flo-cert/29.html. Regarding the operators' data, a lot of information is confidential. Nonetheless, in order to be transparent, some information is internally published and accessible to producers and traders, which help them at identifying potential business partners.
Complaint and fraud reporting	FLO has a dedicated webpage with a form to report misuse of the Fairtrade Mark: http://www.fairtrade.net/807.html. FLO-CERT has a dedicated page on quality feedback to handle complaints about FLO6CERT services of FLO-CERT certified operators: http://www.flo-cert.net/flo-cert/41.html FLO-CERT has developed standard operating procedures for complaints directed to FLO-CERT, for allegations submitted to FLO-CERT against operators holding a Fairtrade certificate, for operators wishing to appeal against any evaluation decision of FLO-CERT. FLO-CERT also publishes statistics on appeals and complaints resolution: http://www.flo-cert.net/flo-cert/fileadmin/user_upload/quality/Complaints_Management_Total_2012_4.pdf
Traceability	
Record-keeping requirements	**Requirements for the operators** The documentation that the operators have to provide is indicated at the following link, through the check-list of what the operators must prove: http://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2013-01-30_GTS_EN.pdf. Other documents, specified to each type of certification, are available. Regarding product tracking, operators must separate physically the fair-trade products except for cocoa, cane sugar, fruit juice and tea for which this is advisable but not compulsory. For those products categories, an enforced physical traceability compromises the aim to maximise the benefits to producers. Thus, methods for demonstrating physical traceability is at the discretion of the operator, whereas for other products, the documentation must allow the certification body to track the products. **Requirements for verifiers** To ensure the quality of the initiatives and the keeping of all operators records, FLO-CERT has five level of documentation: 1. Quality policy: describe the main principles in managing the quality management system 2. Quality manual: describe FLO-CERT structure, the quality management system, the certification scope and process 3. Standard Operating Procedures: describe the main processes and rules of the certification and management system. 4. Work Instructions and Explanatory Documents: describe in detail the procedures 5. Forms: to collect information of various processes The way to deal with records is described and controlled in specific documents. Moreover, FLO-CERT safeguards all Operator Records in its certification software Ecert for a period of five years.
Management of invisible characteristics	Regarding embedded and invisible impacts, the auditor inspect samples of farmers (in the case of producer group), uses interviews of stakeholders and documentation. For example, to verify the criteria "pesticides are applied based on knowledge of pests and diseases", the auditor evaluates whether the member knows the pests and disease, whether he can explain why a particular application was done and whether he uses tools to monitors incidence of pests and diseases and keep records. Another example, to verify that "members do not spray pesticides above and around places with ongoing human activities or with water sources", the auditors performed interviews of various stakeholders and research to evaluate whether the sensitive areas are identified through maps and communicated in advance to pilots, whether in case of no respect of these areas, the organisation has taken corrective measures and whether the organisation warms local population of spraying time.
Governance	
Process for developing the compliance system	The Standard Unit of Fairtrade International develops Fairtrade Standards in compliance with the ISEAL Code of Good Practice for Setting Social and Environmental Standards. The draft Standard is sent to the identified stakeholders for feedback. Those stakeholders usually include producers, Producer Networks, suppliers, retailers, other units within Fairtrade International, FLO-CERT and Labelling Initiatives. FLO has a standard operating procedure for the development of Fairtrade Standards: ttp://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/2012-02-07_SOP_Development_Fairtrade_Standards.pdf

International Fairtrade Certification Mark	
Process for updating the compliance system	Once a year, the quality management system is evaluated on aspects such as the performance of verification, the results of internal audits and the complaints. If relevant, the compliance system can be revised every two years. When a new standard is made or when there is a request to extend the scope of the certification system, FLO-CERT investigates the implications of the extended scope before beginning to implement it. Actual implementation of the new rules begins once they have been integrated in the certification system (modification of the compliance criteria). Clients and consumers are kept informed of such evolutions. See for instance http://www.flo-cert.net/flo-cert/24+M5be40fc9fb3.html?&L=0&tx_ttnews[tt_news]=86
Control of verifiers	FLO-CERT GmbH has been ISO 65 accredited by an external organisation since 2007. Since 2010, the accreditation body is DAkkS (German National Accreditation Body). In the beginning of 2012, FLO-CERT achieved re-accreditation and a new five-year certificate was issued by DAkks. The audits are performed in the FLO-CERT offices but also during the fair-trade audits (witness audits). To ensure the compliance of the verification operation with the ISO 65 standards and the quality management system requirements, an internal entity called the Quality Management Representative (QMR) performs internal audits at least once per year (based on ISO 19011:2002). Quality checks are also performed twice per year. Yearly trainings are organised on the certification process but also on confidentiality handling for auditors.

Cost of the compliance

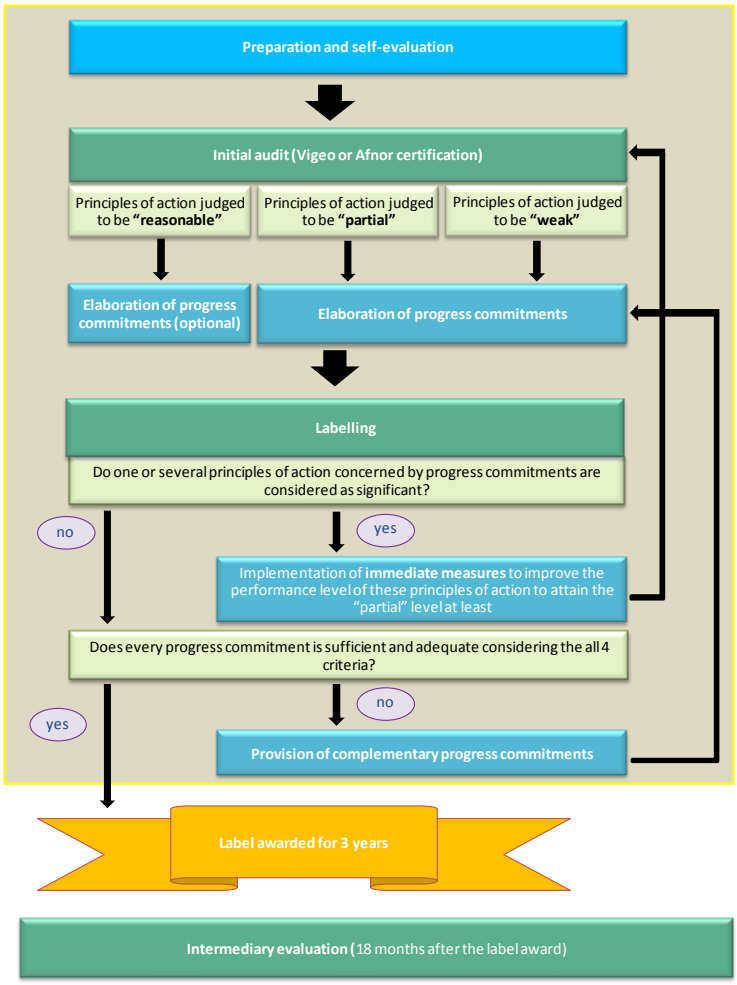
The cost of the certification schemes is composed of the cost of the demand for certification, the initial inspection, and the annual audits.
The variable part depends on the number of working days required to inspect the producer group. A full Fairtrade audit can last from four days for a small producer organisation and up to six or seven weeks for the largest cooperatives. The time the auditor spends on the ground depends on the size of the producer organisation, its complexity, and the number of certified products it is seeking to sell (http://www.fairtrade.net/certifying_fairtrade.html).
All the producer certification fees are detailed at: http://www.flo-cert.net/flo-cert/35.html?&L=0
All the trade certification fees are detailed at: http://www.flo-cert.net/flo-cert/66.html?&L=nurwuoqrzqzoonsr

References

- Fairtrade International, 2011. Fairtrade Standard for Small Producer Organizations – Version: 01.05.2011_v1.1
- Fairtrade International, 2011. Fairtrade Standard for Hired Labour – Version: 01.05.2011
- Fairtrade International, 2011. Fairtrade Standard for Contract Production – Version: 01.05.2011_v1.1
- Fairtrade International, 2011. Generic Fairtrade Trade Standard – Version: 01.05.2011_v1.1
- Fairtrade International, 2012. Standard operating Procedure Development of Fairtrade standards
- ISO Guide 65:1996 – General requirements for bodies operating product certification system
- FLO-CERT GmbH, 2012. SCORE Certification Model – Explanatory Document – Valid from: 01.06.2012
- FLO-CERT GmbH – Public Compliance Criteria Lists – Available at: http://www.flo-cert.net/flo-cert/37.html
- FLO-CERT GmbH, 2012. Quality Manual – Version 54 / 12.09.2012 – Available at: http://www.flo-cert.net/flo-cert/fileadmin/user_upload/quality/QM_QualityManual_ED_54_public.pdf
- FLO-CERT GmbH, 2010. Complaints – Standard Operating Procedure – Valid from: 02.07.2010
- FLO-CERT GmbH, 2013. Allegation – Standard Operating Procedure – Valid from: 02.04.2013
- FLO-CERT GmbH, 2011. Appeal & Review – Standard Operating Procedure – Valid from: 18.11.2011

Label LUCIE

<table>
<tr><th colspan="3">Label LUCIE</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The "Label LUCIE" awards the voluntary efforts of private companies from any sector regarding their performance and progress in the field of Corporate Social Responsibility (CSR). Valid for three years, the label assesses social responsibility along the entire value chain: suppliers/manufacturers, employees, clients and the consumers.</td></tr>
<tr><td colspan="2">Advantages</td><td>Drawbacks</td></tr>
<tr><td colspan="2">Initial assessment – The label is based on a positive approach: the certification delivery is based on initial criteria, assessed through an audit and a progress plan and it awards "good" measures. The label assesses social responsibility along the entire value chain: suppliers/manufacturers, employees, clients and the consumers.
Surveillance – Every 18 months, Vigeo or Afnor certification performs an evaluation to verify compliance with the "Label LUCIE" requirements and with the progress commitment.
Intervention of a verifier – An external body (AFNOR Certification or Vigeo) performs an audit. The activities of AFNOR Certification are accredited by the COFRAC in France (French Committee of Accreditation). Vigeo is not registered as a COFRAC-accredited body. Then an independent award committee evaluates the audit report and the progress plan and delivers the label.
Validity of the proof of compliance – The label is valid for a determined period, taking into account the potential quick evolution of the market and the company. Thus, after three years, the company is re-evaluated as it was initially, taking into account the progress they may have done.
Flexibility – The labelling costs depend on the size of the company
Transparency – The standards, the document that has to be provided, the general verification procedure and the list of labelled companies are publicly available
Traceability – The documentation to provide is listed.</td><td>Transparency – The detailed scoring method is not publicly available. There is no communication on frauds or complaints.
Invisible characteristics – Invisible impacts are verified through documentation exclusively (scoreboard, invoices, certificates, etc.).
Consequences of non-compliance/misuse – The label does not penalise insufficient actions. In case of non-compliance (i.e. if the results of the audit or the progress plan are judged insufficient), there is no sanction. However, the company must take measures.
Governance – Although the standards are elaborated with the help of AFNOR Certification, the governance is ensured by the Agency Lucie, Vigeo and the labeling Committee. The participation of NGO or institution could improve the impartiality of the requirements.
Recognition – The label is not widely known, mostly because it was created recently. Few companies use it.</td></tr>
<tr><td colspan="3">Compliance system set-up</td></tr>
<tr><td>Initial process</td><td colspan="2">▪ The initial application process is composed of five steps.
▪ Step 1. Preparation and self-evaluation – After a training on the ISO 26000 and LUCIE standards, the company performs an internal assessment.
▪ Step 2. Audit – When the company is ready, Vigeo or Afnor Certification performs an initial audit. It aims at assessing the performance level of the company with respect to the 28 principles of actions of the "Label LUCIE". There are three levels of performance: reasonable, partial and weak.
▪ Step 3. Elaboration of a progress plan – For principles of actions that are judged as partial or weak, the company must elaborate a progress plan. The progress plan is optional for principles of actions judged as reasonable.
▪ Step 4. Evaluation – An independent labelling committee evaluates the results of the initial audits and the progress plan with respect to four criteria: reliability of the commitment, precision of the commitment, level of involvement and planning. If a principle of action is judged as weak, it is considered as significant, and the committee may ask for immediate measures.
▪ Step 5. Certification – Once the principles of actions concerned have attained the level "partial" (at least) and the progress plan is considered as satisfying, the label is issued for three years.</td></tr>
<tr><td>Surveillance</td><td colspan="2">Every 18 months, Vigeo or Afnor certification performs an evaluation to verify compliance with the "Label LUCIE" requirements and with the progress commitment.</td></tr>
<tr><td>Renewal</td><td colspan="2">After two years, the company is re-evaluated as it was initially, taking into account the progress they may have done.</td></tr>
</table>

Label LUCIE	
	
Transparency – Availability of information	
Requirements and other information for operators	The requirements for the "Label LUCIE" derive from the ISO 26 000 standard. The evaluation examines the company performance with respect to the 28 principles of actions. The requirements are available at: http://www.labellucie.com/images/stories/Tableau_rsum_rfrentiel_LUCIE_V3_120328BP.pdf A preliminary self-assessment tool is available at: http://www.labellucie.com/telechargements/163-auto-evaluation-lucie
Requirements and other information for verifiers	Guidance for verifiers is not publicly available.
Registry of compliant products or organisations	The companies certified are listed at: http://www.labellucie.com/la-communaute-lucie/les-membres.
Complaint and fraud reporting	There is no communication on frauds or complaints. In addition, it should be underlined that the company can always take measures to obtain the satisfying level.

Label LUCIE	
Traceability	
Record-keeping requirements	**Requirements for the operators** During the evaluation, each principle of actions is assessed. The documents necessary for the audit are listed at: http://www.labellucie.com/images/stories/Tableau_rsum_rfrentiel_LUCIE_V3_120328BP.pdf These documents include certification documents, water and energy consumption bills, etc. After the evaluation, a progress commitment must be made for all the principles of actions for which the performance has been judged "weak" or "partial". This progress commitment must be written, relevant, dated, specific and verifiable.
Management of invisible characteristics	Invisible characteristics, such as clients' satisfaction or dependency of suppliers are verified through documentation: the auditor verifies that a system to verify clients' satisfaction has been implemented, that the company has elaborated a charter for its relation with suppliers for example. Criteria such as "absence of occult agreements" are difficult to verify and the auditor may use audit report, awareness-raising aid, litigation reports, etc.
Governance	
Process for developing the compliance system	The labelling rules were defined by the Agency Lucie in partnership with AFNOR Certification, Vigeo and the labelling committee.
Process for updating the compliance system	No information regarding a process for updating the compliance system is available. However, since the label is relatively new, a procedure for updating the compliance system has probably not been studied yet.
Control of verifiers	The activities of AFNOR Certification are accredited by the COFRAC in France (French Committee of Accreditation). Vigeo is not registered as a COFRAC-accredited body.
Cost of the compliance	
The cost includes the initial training on the ISO 26000 and the "Label LUCIE" standards, two evaluations and their reports (the initial audit and the 18-month evaluation), the license fee for the use of the Label and the services from the LUCIE community. The available information regarding the costs is the following: ▪ Initial training: €800 (fixed) ▪ Evaluation: variable cost depending on the number of employee, the number of sites and the turnover of the company (for example, for a 20-person company: €4,200 for initial audit and €1,950 for the second evaluation) ▪ The License fee is a variable cost that amounts to 0.01% of the annual turnover with a lower limit of €1,000 and an upper limit of €12,000 per year (for example, for a 20-person company: €3,000 for three years)	
References	
▪ Label LUCIE website: http://www.labellucie.com/ ▪ Label LUCIE, 2012. Référentiel d'évaluation RSE du label LUCIE – 7 engagements et 28 principes d'actions – Version 1 - 28/03/2012	

NF Mark/NF Service

NF Mark/NF Service	
Key messages	
Nature of the scheme	The NF mark and NF Service mark are labels delivered by AFNOR Certification that guarantee that the NF rules specific to the product/service are respected. NF rules relate to the quality and the safety of industrial products and consumer goods or services. For NF Service, the right to use the mark is valid for one or two years (depending on the service) the first time. Then, it is re-awarded for three years. For NF mark, the right to use the mark is valid for three years.

Advantages	Drawbacks
Initial assessment – The certification process is based on tests (for products), documentation review and on an audit of the quality system. **Surveillance –** Surveillance activities are performed every year. For NF Mark, at least one audit per year (and possibly testing) is performed. For NF Service, an audit and client interviews are performed to renew the certification. For NF Service, surveillance activities seem to depend on the size of the company and the number of sites. **Intervention of a verifier –** All verifiers must be accredited by the COFRAC. **Validity of the proof of compliance –** For NF mark, the right to use the mark is valid for three years. For NF Service, the right to use the mark is valid for one or two years (depending on the service) the first time. Then, it is re-awarded for three years. **Flexibility –** The standards are specific to product and service categories. A company can also develop a standard for its own product category. **Transparency –** The list of the certified companies is available on AFNOR website **Traceability –** The documents to be provided are indicated in the certification rules and the NF mark is affixed on the product with the batch number if possible. **Invisible characteristics –** The verification of invisible impacts mainly concerns NF Service for which the commercial service and the client satisfaction are verified through documentation and interviews. For products, the quality plan and the purchase process can also be verified through documentation during inspection. **Consequences of non-compliance/misuse –** In case of non-compliance, the certification and the right to use the NF Service Mark is temporarily or permanently suspended. **Recognition –** the NF Mark and NF Service Mark are widely known in France and visible at international level since the label is visible on the products. According to a survey of the French survey institute IPSOS, 85% of French people know the NF mark in 2009.	**Flexibility –** The cost only depends on the product category **Transparency –** Lack of transparency due to the positioning of the label as a demarcation label: the standards and the certification guidance are mostly not available for free. There is no communication on misuse and the certification criteria are not freely available. However, the list of the certified companies is available. **Governance –** Standards can be developed by a manufacturer. The standards and certification rules are validated by the mark committee who are not systematically expert in the field of the manufacturer.

NF Mark/NF Service	
Compliance system set-up	
Initial process	▪ 1. **Analysis of the requirements and certification request –** The manufacturer initiates the certification process by completing a certification request. If it is considered eligible by AFNOR certification and the NF Network, the manufacturer must provide the documentation required by the certification rules. ▪ 2. **Tests (only for NF Mark) –** In the case of products, tests are performed on products. ▪ 3. **Documentation review –** A documentation review is performed to verify the documentation provided and the testing. ▪ 4. **Audit –** An authorised body performs an audit of the quality system. This audit usually lasts one to three days. For products, the testing is also controlled. For services, auditors conduct an audit of the quality system that focuses on the organisation of the company, the implementation of the service, its quality and its improvement. Then, the authorised body writes an audit report, which includes the positive points, the negative points and the non-compliance points. The manufacturer may mention the corrective measures he would implement. If the site is ISO 9001-certified, a simplified procedure may be implemented. ▪ 5. **Certification –** A summary of the documentation review, the audit results and the testing is provided to the Mark Committee ("Comité de Marque"). Then, this committee decides to award (or not) the right to use the NF/NF Service Mark. ▪ 6. **Communication –** The NF/NF Service mark is placed on the products, packages, technical documents, and sales and communication media.
Surveillance	Surveillance activities involve both the manufacturer and AFNOR Certification. ▪ The manufacturer has to control the product/service's compliance with the NF requirements. ▪ For products, AFNOR Certification conducts inspections and testing on products from the company or from the market. ▪ For services, AFNOR Certification conducts audits, a documentation review and customer satisfaction survey . For NF Mark, at least one audit per year is performed. The audit includes a verification of documents and products (certified products, products for which certification is in progress and products whose characteristics have been modified), with possible tests and/or a quality assessments to take into account possible changes in the product characteristics. For NF Service, surveillance activities seem to depend on the size of the company and the number of sites. In case of documentation review, the manufacturer must provide the report of the customer satisfaction survey and an analysis of the points to be improved. "Mystery calls" can also be made. In case of non-compliance, the certification and the right to use the NF Service Mark is temporarily or permanently suspended.
Renewal	For NF Mark, by the end of the certification validity period, the manufacturer must provide a testing report for a sample that has been produced within the last six months. For NF Service, an audit is performed to renew the certification.

NF Mark/NF Service	
Transparency – Availability of information	
Requirements and other information for operators	The product/service has to comply with the national, European and international regulatory documents (i.e. technical standards, specifications or Directives) that apply to the product/service under conditions defined by the Certification Guidelines. The standards can be bought from the AFNOR website or accessed through NF research portal: http://www.marque-nf.com/recherche.asp They may also be available on other websites. As an example, information about the standards and related documents that apply to early childhood products is available at: http://www.marque-nf.com/appli.asp?lang=English&NumAppli=NF315. Similar information about the service referred to as "Services for resident persons" is available at: http://www.marque-nf.com/appli.asp?NumAppli=NF311&lang=English. The general certification process is explained at: www.marque-nf.com. The detailed process can be bought from the AFNOR website, provided on request by the AFNOR or found on other websites. The list of authorised bodies is available at: http://www.marque-nf.com/pages.asp?Lang=English&ref=reseau_organismes_mandates The list of technical secretariats is available at: http://www.marque-nf.com/pages.asp?Lang=English&ref=reseau_secretariats_techniques The list of laboratories is available at: http://www.marque-nf.com/pages.asp?Lang=English&ref=reseau_liste_laboratoires The list of the organisations specialised in inspection and auditing is available at: http://www.marque-nf.com/pages.asp?Lang=English&ref=reseau_inspection The documentation the operators have to provide is listed in the certification rules. For example, the list of documents that must be provided for early childhood products certification is available at: http://www.lne.fr/fr/certification/reglements/marque-nf-315-petite-enfance/reg-nf-315-p3-obtention-certification-jouets-puericulture.pdf.
Registry of compliant products or organisations	The list of the NF/NF Service mark holders for each category is available on the AFNOR website. For example, the list of NF Service mark holders for urban passenger transport is available at: http://www.marque-nf.com/download/produits/FR/NF286.pdf The lists of the certified products/services are available on the website of the NF network members (e.g. http://www.lne.fr/fr/certification/entreprises-certifiees.asp)
Complaint and fraud reporting	There is no communication on misuse in order not to discourage companies from applying for certification.
Traceability	
Record-keeping requirements	The documents that the operators have to provide and the traceability requirements are detailed in the certification rules (see "Requirements and other information for verifiers"). The NF mark must be affixed on the product with the batch number when possible. The manufacturer must be able to present to authorities the records of a batch at the factory gate and at the receiving in the warehouses, the records regarding information on design and production, the results of the previous audits, the update or modification on the products/services or the quality system and the handling of complaints. The verifier can copy any document he needs. He must give the audit report to the operator and keep a copy for the authorised body. The members mandated by AFNOR Certification must keep a copy of demand and audits.
Management of invisible characteristics	The management of embedded impacts is not clearly indicated and moreover the guide for certifiers is not publicly available. The verification of invisible impacts mainly concerns NF Service for which the commercial service and the client satisfaction are verified through documentation and interviews. For products, the quality plan and the purchase process can also be verified through documentation during inspection. For example, regarding the quality of the raw materials, the manufacturer must be able to answer to questions such as: how does he know the specifications? How does he ensure that the bought products comply with these specifications? How does he know when a raw material changes? What is the control plan for finished product? The type of evidences that the manufacturer has to provide and the way that the auditor controls that aspect is not indicated.

NF Mark/NF Service	
Governance	
Process for developing the compliance system	The process of development of an NF/NF Service mark is composed of two steps: ▪ **Step 1 – Development of the specification and/or testing standards** – The operator(s) concerned analyse(s) the needs and define(s) the commitments and performance levels to be achieved (certified characteristics) and the testing arrangements (for products). ▪ **Step 2 – Development of the certification reference system** – The operator(s) set(s) mark granting rules (inspection arrangements, type and frequency) which are then validated by a mark committee and approved and published in the Journal Officiel.
Process for updating the compliance system	No information regarding a process for updating the compliance system is available.
Control of verifiers/certifiers (if relevant)	The authorised bodies, the technical secretariats, the laboratories and the organisations specialised in inspection and auditing must comply with the NF EN 45 011 or NF EN ISO/CEI 17025 standards. The certification activities of AFNOR Certification and the ones of the organisations of the NF network are accredited by the COFRAC (COmité FRançais d'ACcréditation, French Accreditation Committee). The certification process seems to be periodically audited or checked. No further information regarding the certification process is provided.
Cost of the compliance	
The cost associated with this compliance system depends on the product category. As an example, the costs for NF Childhood ("petite enfance") are as follows: ▪ Cost of the examination of the application for certification: €1,575 (excluding taxes) + €263 (excluding taxes) per product category ▪ Cost of the audit: approximately €1,471 (excluding taxes) per day (usually one to three days are needed of the audit) ▪ Cost of quality surveillance: €1,030 (excluding taxes) + €132 (excluding taxes) per product category + a €148 (excluding taxes) fee for using the mark.	
References	
▪ NF mark and NF Service mark official website: http://www.marque-nf.com/ ▪ AFNOR official website: http://www.afnor.org/ ▪ AFNOR, 2006. General rules of the NF mark, Version 23-04-2012 ▪ AFNOR, 2006. General rules of the NF Service mark, Version 03-02-2011 ▪ AFNOR, 2005. NF EN ISO CEI 17025 Exigences générales concernant la compétence des laboratoires d'étalonnages et d'essais ▪ NF EN 45011 (1998). Exigences générales relatives aux organismes procédant à la certification de produits	

Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC

<table>
<tr><th colspan="3">Renewable Energy Directive (RED) – Sustainability criteria for biofuels in Directive 2009/28/EC</th></tr>
<tr><td colspan="3">Key messages</td></tr>
<tr><td>Nature of the scheme</td><td colspan="2">The EU Renewable Energy Directive 2009/28/EC (RED) sets targets for an EU wide 20% share of energy from renewable sources by 2020 and a 10% share of renewable energy in the transport sector. The RED also introduces mandatory sustainability criteria (articles 17, 18 and 19) for biofuels (transport) and bio-liquids (electricity, heating and cooling). The RED was adopted in 2009 and had to be transposed in national legislation by all member states by December 2010. Biofuels consumed in the EU (regardless of the country where they were produced) need to comply with the mandatory sustainability criteria to qualify for public support.

Three ways to show compliance with the sustainability criteria exist but only the first two are currently operational:
▪ National systems (Economic operators directly submit information to member states authorities – Art 18.3). In the national systems of some Member States, RED compliance is linked to requirements under the Common Agricultural Policy (CAP) and national nature protection legislation, or to land zoning based on national inventories of RED-compliant and non-RED-compliant areas.
▪ Voluntary schemes recognised by the Commission (Art 18.4) or member state-recognised national voluntary schemes;
▪ Bilateral and multilateral agreements concluded by the EU with third countries. The Commission may decide that those agreements demonstrate that biofuels and bioliquids produced from raw materials cultivated in those countries comply with the RED requirements (Art 18.4).

RED certification applies to biofuels consumed within the EU. Biofuels certified through an EC-recognised certification scheme are accepted as "sustainable" in line with the RED by all member states. Cooperation across Member States implies that some national systems and national certification schemes are recognised in other member states as well.</td></tr>
<tr><th>Advantages</th><th>Drawbacks</th></tr>
<tr><td>Initial assessment – All the stages of biofuel production are taken into account. It includes actors such as: farmers growing crops for biofuel production, raw material collectors or trading companies, biofuel producers, fuel suppliers

Surveillance – After the initial application process, the surveillance can be performed by national inventories, voluntary schemes or multilateral agreements. In France for example, annual controls are performed.

Intervention of a verifier – Auditors must be independent and have appropriate generic and specific skills. Depending on MS, the auditor can be accredited.

Flexibility – The standard is unique but the verification system varies across Member States.

Transparency – The standard and the verification guide is available for each MS. Each MS also publishes a yearly report regarding the biofuel use statistics.

Traceability – Operators must keep records for at least five years and the chain of custody is verified through mass balance system.

Governance – The systems to prove compliance with the sustainability criteria, can be elaborated at various levels, involving different type of stakeholders, including industry.</td><td>Initial assessment – The RED does not set specific requirements for the initial application process. The initial application process will vary from one national system to another and from one voluntary certification scheme to another.

Validity of the proof of compliance – The proof of compliance is valid until non-compliance is proved.

Flexibility – The variation of the verification process across MS can induce heterogeneity in the criteria assessed and also in terms of reliability.

Invisible characteristics – The invisible impacts can be verified through documentation but also by simple producer declaration.</td></tr>
</table>

Invisible characteristics – in France, for a voluntary initiative (ARVALIS), the compliance level is classified according the level of requirements. Thus, the producers can prove the compliance by self declaration, documentation or auditable board with documentation. **Consequences of non-compliance/misuse –** the companies will not receive the financial support. Some MS has also implemented a penalty system (13 MS) The RED requires economic operators along the biofuel supply chain to use a mass balance system to ensure the chain of custody. The verification within the value chain is light but it exists. **Recognition –** the standard is recognised by European Institutions	
Compliance system set-up	
Initial process	The RED does not set specific requirements for the initial application process. The initial application process will vary from one national system to another and from one voluntary certification scheme to another.
Surveillance	There are three ways of demonstrating compliance. The majority of the MS (among those that had fully implemented the RED in 2012) have a national system in place (13) while seven member states only allow for the use of voluntary schemes. MS have to report to the Commission on compliance with the sustainability criteria for biofuels. A summary of this information will be published by the Commission (RED Art 18.3). The EC's first progress report on meeting the RED targets that includes an assessment of biofuel sustainability issues and member state implementation of the sustainability scheme was published in March 2013. It is available at: http://ec.europa.eu/energy/renewables/reports/reports_en.htm. The consequence of non-compliance with the sustainability criteria is that the biofuels and bioliquids concerned will neither be eligible for financial support nor count towards the targets of RED and FQD (in line with RED Art 17.1). It is important to understand at this point that the consumption of unsustainable biofuels in the EU does not violate the RED. Ecofys and IEEP (2012) have analysed whether member states have other penalty systems in place to deter economic operators from non-compliance or fraudulent behaviour such as non- or mal-reporting for biofuels marketed with the purpose of, for example, fulfilling a biofuel blending obligation. This is the case in 13 member states (often in the form of fines). Seven member states have no penalty system in place. For the remaining member states, no information was available.
Renewal	No information about renewal is provided in the RED.
Transparency – Availability of information	
Requirements and other information for operators	There are three ways of demonstrating compliance. Guidance and requirements for operators will vary across national systems and certification schemes.
Requirements and other information for verifiers	Article 18(3)of the RED spells out that: "Member States shall take measures to ensure that economic operators submit reliable information [...] Member states shall require economic operators to arrange for an adequate standard of independent auditing of the information submitted [...] [They] shall evaluate the frequency and methodology of sampling and the robustness of the data." The Communication (2010/C 160/02) from the Commission provides further guidance on the types of evidence of compliance that are deemed appropriate. Evidence of compliance with land-related criteria could entail the provision of aerial images, satellite photographs, maps, specific documentation on land registrations and surveys performed at site. Communication 2010/C 160/01 also spells out requirements regarding auditing in order for the voluntary schemes to be recognised by the Commission. Auditors must be independent and have appropriate generic and specific skills. They must also offer the possibility of group audits making reference to appropriate ISEAL standards.

Registry of compliant products or organisations	Communication depends on voluntary scheme rules. In some member states, authorities publish more detailed information on biofuel suppliers sustainability performance than in others. As far as we are aware, the UK and the Netherlands are frontrunners when it comes to detailed reporting. The NL Government report, including information on feedstock used for biofuels per fuel supplier, can be found at https://www.emissieautoriteit.nl/mediatheek/biobrandstoffen/publicaties/Individuele%20rapportage%20DEF.pdf The UK Government "Verified data" reports under the Renewable Transport Fuel Obligation (RTFO) include data on company performance. They can be found at https://www.gov.uk/transport-statistics-notes-and-guidance-biofuels#older-publications
Complaint and fraud reporting	There is no guidance regarding the communication of frauds and complaints in the RED Communication of frauds will vary across national systems and voluntary schemes. Article 18(3) only spells out that "member states shall require economic operators to arrange for an adequate standard of independent auditing […]. The auditing shall verify that the systems used by economic operators are accurate, reliable and protected against fraud".
Traceability	
Record-keeping requirements	Communication 2010/C 160/01 spells out requirements in order for the voluntary schemes to be recognised by the Commission. These include having an auditable system in place, keeping records for at least five years and providing any information necessary when auditing their set up claims. The RED requires economic operators along the biofuel supply chain to use a mass balance system to ensure the chain of custody. The mass balance system (Art 18.1): (a) allows consignments of raw material or biofuel with differing sustainability characteristics to be mixed; (b) requires information about the sustainability characteristics and sizes of the consignments referred to in point (a) to remain assigned to the mixture; and (c) provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture. The Commission's Communication 2010/C 160/01 further specifies that the mass balance system should be operated at the site level (as compared with the company or tax warehouse level). This is needed to ensure effective tracing of materials and biofuels throughout the supply chain.
Management of invisible characteristics	The invisible impacts are verified through documentation. For example, raw materials should not be obtained from land with high carbon stock. The compliance of this criterion can be proved by aerial photographs, satellite images, maps, land register database and site survey indicating the status of the land in January 2008. For specific initiative such as for a voluntary French initiative (ARVALIS), the compliance level is classified according the level of requirements. Thus, the producers can prove the compliance by self-declaration, documentation, or auditable board with documentation.

Governance	
Process for developing the compliance system	Being part of the RED, the compliance system has been adopted by the European institutions through the regular co-decision procedure. The Commission published Communications providing further guidance relating to compliance and other issues (Communication 2010/C 160/01, Communication 2010/C 160/02). National government bodies or agencies are usually the ones that are responsible for developing the compliance system as part of the member state's national system, and for collecting information on sustainability at the member state level. Voluntary certification scheme developments tend to be private sector initiatives. Several certification schemes have been developed for the purpose of the RED (e.g. Roundtable on Sustainable Biofuels). At the same time, existing schemes (e.g. targeted at specific agricultural products and/or markets) have been extended to make them "RED-compatible" (e.g. Roundtable on Sustainable Palm Oil). The development of some certification schemes involved stakeholders from the industry, academics, NGOs, etc. Voluntary schemes can be recognised by the Commission after a "comitology" process. As of April 2013, the Commission has officially recognised 13 schemes. The list of recognised schemes is available at: http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm.
Process for updating the compliance system	Voluntary certification schemes and national systems need to be in line with EU guidelines. Major changes presumably can only be brought about through amending the RED.
Control of verifiers	The Communication 2010/C 160/01 states that voluntary schemes should demonstrate in their request for recognition that they ensure the appropriate conditions for the verifiers with competency and specific skills to be selected, as well as for the audits to be properly planned, carried out and reported on.

Cost of the compliance

The NL Agency (2012) conducted a study on the costs associated with biofuel sustainability certification. Key elements of the RED certification costs are summarised below.

Costs can be split into two categories, namely direct costs and indirect costs.

Direct costs include certification fees and auditing costs. Both costs are inherently dependent on the company profile and cannot be estimated with certainty. Certification fees include a membership fee and/or a quantity-dependent fee. Membership fees are generally based on property size, amount of feedstock processed or yearly financial turnovers (Pacini and Assunção, 2011). Among the biofuel certification schemes evaluated in the report (REDcert, RSB, RSPO, RTRS, Bonsucro, ISCC), REDcert offers the less expensive membership fees (€250/year for large companies, between €150 and €250 /year for small companies). REDcert certification costs are set out in the table below.

Certification costs (in Euros, exc. VAT), 2012

REDcert (either annual fee or certificate fee + fee per metric ton of biomass)	
Annual membership fee	€150-250 (depends on company's annual turnover)
Certification fee	€50/site Lower fee from fourth site on
Fee per metric ton biomass	Ethanol: 0.027 FAME: 0.035 Biomethane: 0.5

Source for the table: SQ Consult (2012)

Indirect costs can vary greatly from one company to another and can lead to an increase in the product cost of up to 30%. There are two types of indirect costs:

- Administrative indirect costs – arising from the requirement of having traceability tools in place and from the man-days needed in order for correct and documented mass balance to be executed (these costs can be more significant the first years of certification, i.e. until they are fully integrated in the company's management plans)
- Costs related to sustainability compliance – occurring when closing the gap between sustainable and unsustainable practices

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Roundtable on Sustainable Palm Oil (RSPO)

Roundtable on Sustainable Palm Oil (RSPO)	
Key messages	
Nature of the scheme	RSPO is a voluntary labelling initiative. It is a product-oriented scheme since the RSPO trademark is affixed on palm oil products. The RSPO standards include legal, economic, environmental and social requirements for sustainable palm oil production.

Advantages	Drawbacks
Initial assessment – The certification concerns both product and supply chain. It includes an initial audit that can include field checks and stakeholder interviews. Sample of small holders can also be verified in case of groups. **Surveillance –** There is annual surveillance that is a complete surveillance procedure as it is similar to the initial verification. **Intervention of a verifier –** The assessments are performed by certification bodies who must be accredited. **Validity of the proof of compliance –** The certificate is valid for five years. **Flexibility –** The standards are simplified for small holders. Multi-stakeholders working groups must develop national and local interpretations of the standards according to national context and the verification process is also specific. The certification bodies must define the procedure related to the compliance assessment (in accordance with the guidelines of the RSPO). **Transparency –** The complaints, the standards, the certification procedure and the members are publicly available. **Traceability –** Traceability is ensured by documentation that the operators have to keep for at least five years. Group manager has to ensure that the independent smallholders comply with the RSPO requirements. In doing so, the group manager shall implement an internal control system including risk assessment, internal monitoring and control procedures. The group manager and a sample of group members are evaluated during the audit. **Invisible characteristics –** The invisible impacts can be verified through documentation and interview in local communities. For subcontractors, the verifier must check the subcontractor's activities but he can decide whether a visit is necessary or not. In case of groups, the auditor verifies that the group manager has implemented an internal control system including risk assessment, internal monitoring and control procedure through documentation. **Consequences of non-compliance/misuse –** All non-conformities observed during the audit are considered as "major" since all requirements have to be met before the visit. If major non-conformities raised during surveillance assessments are not addressed within 60 days, the certificate is suspended. If they are not addressed within a further 60 days, the certificate is withdrawn. Minor nonconformities are raised to major if they are not addressed by the following surveillance assessment. **Governance –** A test period is necessary to implement a new standard.	**Initial assessment –** The RSPO allows palm-oil producers and processors to become ordinary members without actually having their operations certified (RSPO Code of Conduct). RSPO audits are not adequately field checked to ensure there is no child labor or forced labor in the plantations (Borneo Project) **Flexibility –** Since the verification body must develop its own verification procedure, heterogeneity in the reliability could be observed. **Consequences of non-compliance/misuse –** The RSPO does not have an independent watchdog group that monitors and critiques the organisation to ensure that it abides by its own structures. There is no permanent monitoring body. Only when there is a written complaint a grievance panel is established to conduct investigative research and provide recommendations for action by the RSPO. The Grievance Panel is composed of Executive Board members (Laurance *et al*, 2010) **Governance –** There is lack of impartiality and consensus: only four of the 16 members of its executive board are from conservation or social-developmental organizations. The Executive Board is composed of 16 members: Oil palm growers (4 seats), Palm oil processors (2), Consumer goods manufacturers (2), Retailers (2), Banks/investors (2), Environmental NGOs (2) and Social NGOs (2). Of 312 ordinary-member organizations as of October 2009, just 12 and nine hail from conservation or social-development groups (Laurence W.F. *et al*, 2010). **Recognition –** the RSPO label is widely known. However, it has been criticised by environmental NGOs due to its industry-led organisation (Laurence et al. 2010).

Compliance system set-up	
Initial process	Both the production of palm oil and two of the three supply chain mechanisms (the "fully segregated" and the "mass balance" mechanisms) must be certified. International RSPO standards for certification must be nationally interpreted by the certification body to fit the national context. The general application process is as follows: ▪ **1. Impact assessment and implementation plan (new plantings only) –** An assessment of the social and environmental impacts of the land used by the applicant must be conducted by an external body. The applicant must also develop a management plan for the area. ▪ **2. Client application and contract –** The applicant requests certification to a RSPO-approved certification body. The certification body must ensure that the applicant has all the necessary information and establishes a quote. Once the contract is signed, the applicant must provide the documentation proving its compliance. ▪ **3. Document review –** The certification body reviews the management documentation to ensure that the applicant complies with the standards. The applicant must comply with the eight principles of the standards that include "yes/no" criteria and progress criteria. All non-conformities are classified as "minor" or "major". If necessary, the certification body can ask the applicant to take corrective measures (Corrective Actions Requests). ▪ **4. On-site assessment –** The certification body performs an audit that can include field checks and stakeholder interviews. The audits procedure for production certification is detailed in the certification process developed by the certification bodies. For supply chain certification, the certified body reviews the organisational system, the management system and the operational system. If the applicant has subcontractors, the certification body must verify the subcontractors' activities but it can decide whether a visit is necessary or not. In the case of group certification, the group manager and a sample of group members are evaluated. ▪ **5. Results –** The certification body prepares a certification report, including the actions the applicant must complete before being certified. All non-conformities observed during the audit are considered as "major" since all requirements have to be met before the visit. All non-conformances (whether minor or major) observed have to be satisfactorily addressed before certification may be granted by the certification body. If non-conformances are not addressed within three months of the audit, a full re-audit is required. Moreover, the certification body has to assess the effectiveness of the corrective and/or preventive actions taken before closing out the non-conformances. ▪ **6. Certification –** When all major non-compliances are addressed, the certificate is issued. Then, the certification body notifies the RSPO about the certification and the RSPO website is updated. The certificate is valid for five years. Minor non-compliances have to be addressed by the next annual assessment.
Initial application process	In the case of smallholders, "scheme smallholders"[131] should be certified along with the mill with which they are associated. Thus, the mill seeks the certification and must ensure that all the smallholders are brought into compliance within three years. Independent smallholders are to be certified on their own. However, the group manager (independent from the mill) has to ensure that the independent smallholders comply with the RSPO requirements. In doing so, the group manager shall implement an internal control system including risk assessment, internal monitoring and control procedures. The group manager and a sample of group members are evaluated during the audit. Information about how to be RSPO-certified is available at: http://www.rspo.org/en/how_to_be_rspo_certified.

[131] RSPO definition: Scheme smallholders are characterised as smallholders who are structurally bound by contract, by a credit agreement or by planning to a particular mill.

Surveillance	During the lifetime of the certificate, an annual surveillance assessment (ASA) must be performed (not necessarily by the same certification body). The procedure is similar to the initial assessment process. Surveillance concerns all contractors, smallholders, landowners, etc. In particular, the certification body must verify the volume, the previous non-conformities and the changes made to address them. If major non-conformities raised during surveillance assessments are not addressed within 60 days, the certificate is suspended. If they are not addressed within a further 60 days, the certificate is withdrawn. Minor nonconformities are raised to major if they are not addressed by the following surveillance assessment. Finally, the certification body must submit the report of the ASA to the RSPO for review. The RSPO decides whether the certificate is still valid or not.
Renewal	Before the end of the initial certification period, a full re-audit has to be conducted. At the re-audit for supply chain certification, the certification body verifies the company's annual summary records to determine whether more RSPO-certified oil palm has been claimed than purchased. If necessary, a second visit can be planned.
Transparency – Availability of information	
Requirements and other information for operators	General information on the standards and the certification process is available in the RSPO official website. The requirements for the production of RSPO-certified Palm Oil are the RSPO Principles and Criteria for Sustainable Palm Oil Production. They are based on eight principles and can be found at http://www.rspo.org/file/PnC_RSPO_Rev1.pdf . The general procedure for first certification is available at: http://www.rspo.org/en/document_new_planting_procedure RSPO also has specific standards for scheme (associated) and independent smallholders. The text does not include new indicators of sustainability but requirements in terms of certification organisation. These standards are available at: http://www.rspo.org/files/resource_centre/keydoc/10%20en_RSPO%20Principles%20and%20Criteria%20for%20Sustainable%20Palm%20Oil%20Production%20(2009).pdf and at http://www.rspo.org/files/resource_centre/keydoc/11%20en_RSPO%20Principles%20and%20Criteria%20for%20Sustainable%20Palm%20Oil%20Production%20(2010).pdf . RSPO has a specific standard for group certification as well. It is available at: http://www.rspo.org/files/resource_centre/keydoc/14%20en_RSPO%20Standard%20for%20Group%20Certification%20(July%202010).pdf Finally, the standard regarding the supply chain is available at: http://www.rspo.org/files/resource_centre/keydoc/15%20en_RSPO%20Supply%20Chain%20(Nov%202011).pdf
Requirements and other information for operators	Multi-stakeholders working groups must develop national and local interpretations of the standards according to national context. In order to keep control of the quality of any set of indicators claiming to be official interpretations, national interpretations require endorsement or recognition by RSPO. The guidelines for national interpretations of the Principles and Criteria are available at: http://www.rspo.org/en/document_national_interpretations (last update: 2010). Information on the certification system is mentioned in the part "guidance for verifiers". The list of the approved certification bodies for production is available at: http://www.rspo.org/en/principles_and_criteria The list of the approved certification bodies for Supply Chain is available at: http://www.rspo.org/en/certification_bodies.

Requirements and other information for verifiers	The global guidelines for developing the certification system are mentioned at: http://www.rspo.org/files/resource_centre/RSPO%20certification%20systems_2007_revised%204.2.4%20&%201a_Oct%202011_FINAL.pdf. The guidelines also contain a list of indicators, including compulsory indicators, with which the applicant must comply. Each accredited certification body must define the procedure related to the assessment process in line with the ISO Guide 65 and the ISO Guide 66. He must develop local indicators for the certification system, referring to the national interpretations of the RSPO Standards and Principles. These indicators must be approved by the RSPO. The guidelines for the certification system for group are available at: http://www.rspo.org/files/resource_centre/keydoc/4%20en_RSPO%20Accreditation%20and%20Certification%20Requirements%20for%20Group%20Certification.pdf. The guidelines for the certification system for the supply chain is available at: http://www.rspo.org/files/resource_centre/keydoc/15%20en_RSPO%20Supply%20Chain%20(Nov%202011).pdf. The procedure for annual surveillance assessments is available at: http://www.rspo.org/files/resource_centre/Annex%204%20Procedures%20for%20Annual%20Surveillance%20Assessments.pdf . The local indicators are available at: http://www.rspo.org/en/document_local_indicators.
Registry of compliant products or organisations	The list of RSPO-certified growers in 2013 (and the area concerned) is available at: http://www.rspo.org/en/certified_grower The list of RSPO-certified Supply Chain Members is available at: http://www.rspo.org/en/current_list_of_supply_chain_certification The list of RSPO trademark licensees is available at: http://www.rspo.org/en/trademark_licensees
Complaint and fraud reporting	The complaints and their resolution are communicated at: http://www.rspo.org/en/status_of_complaint According to the document on the RSPO Supply Chain certification systems, the certification body must make its procedures for complaints and grievances, including resolution mechanisms, publicly available upon request.
Traceability	
Record-keeping requirements	The RSPO Principles and Criteria document states which pieces of objective evidence that must be in place to demonstrate or verify that the criteria are being met are. These pieces of objective evidence are referred to as "indicators" in that document. The General Chain of Custody System requirements of the RSPO supply chain standard apply to any organisation throughout the supply chain that takes legal ownership and physically handle RSPO-certified products. These requirements aim at ensuring the traceability of the product by providing documentation on the value chain (documented procedures, purchasing and goods in, outsourcing activities, sales and goods out, registration, training and claims). Retention times for all records and reports shall be at least five years. Details about these information requirements, in particular those considering the various Chain of Custody types, can be found in the RSPO Supply Chain Certification standard. According to the RSPO Supply Chain Certification Standard, supply chain actors who take legal ownership and physically handle RSPO-certified products and who are part of the supply chain of RSPO-certified products (up to the final refinery) need to register their transaction in the RSPO IT system upon the moment of physical shipment. Detailed information about the actors that must register and those that do not need to register, is available in the Registration section of the RSPO Supply Chain Certification Standard. There is no specific requirement for verifiers/certifiers.

Management of invisible characteristics	The invisible impacts can be verified through documentation and interview in local communities. For subcontractors, the verifier must check the subcontractor's activities but he can decide whether a visit is necessary or not. In the case of group certification, the group manager and a sample of group members are evaluated. The auditor verifies that the group manager has implemented an internal control system including risk assessment, internal monitoring and control procedure through documentation. For example, to verify the criteria related to the maintenance of soil fertility, the operator has to provide records of fertilize inputs, evidence of periodic tissue and soil sampling to monitor changes in nutrient status and a nutrient recycling strategy. Nonetheless, the verification means are not systematically detailed. For example, to verify that "growers and millers contribute to local sustainable development", the operator has to demonstrate contributions to local development that are based on the results of consultation with local communities. The mean is left at the discretion of the operator and there is no precision on the method of determining the acceptability of evidences.
Governance	
Process for developing the compliance system	Specific working groups, composed of RSPO members, developed the general features of the standards and the compliance system. For example, the RSPO Supply Chain Certification Systems are based on the outcome of the supply chain models study adopted at RT4 (the fourth roundtable on sustainable palm oil, November 2006). Afterwards, the Executive Board approved the features. The Executive Board is elected by RSPO members during the annual general assembly of members. It is composed of 16 members: Oil palm growers (4 seats), Palm oil processors (2), Consumer goods manufacturers (2), Retailers (2), Banks/investors (2), Environmental NGOs (2) and Social NGOs (2). The standards are also tested, for example, the elaboration of the certification procedure for smallholders and the practicality of the generic guidance had first been field tested through trial audits to see if the text really suited smallholder realities during a two-year pilot period following the adoption of this guidance. Finally, based on these general certification standards, the certification body must develop the appropriate local indicators that he must submit to the RSPO Secretariat for approval. Once approved, the local indicators are published on the RSPO website. The guidance for National interpretation of the standards and principles is available at: http://www.rspo.org/file/RSPO%20Criteria%20Final%20Guidance%20with%20NI%20Document.pdf (last update: 2006).
Process for updating the compliance system	The RSPO Certification Systems document (2007, revised on March 2011) states that the RSPO Verification Working Group (VWG) was established in order to provide detailed recommendations on certification arrangements to be considered by RSPO's Executive Board (EB). RSPO decided that the standards would be reviewed within five years, which is currently the case since there has been a public consultation for the revision of the Principles and Criteria from October 1st to November 30th, 2012. The RSPO Executive Board can also decide to review any aspect of these systems at any time. Certification bodies will be asked to hold an annual meeting to review best practice and provide feedback to RSPO.
Control of verifiers	Certification bodies must demonstrate that their accredited systems and their competencies include all the requirements detailed in the RSPO Certifications Systems document by submitting an annual report. They must be accredited such that their organisation, systems and procedures conform to ISO Guide 65 and/or ISO Guide 66. Currently, the ASI (Accreditation Services International GmbH) carries out evaluation of certification bodies. The requirements are reviewed by RSPO annually. These requirements are about specific skills of assessment teams, the assessment process, public availability of documentation (including the results of certification), their independence, etc.

Cost of the compliance

The cost of the certification scheme is composed of the cost of the initial audit, the surveillance audits (once a year), RSPO membership fees, palm oil trading fees and trademark license compensations.

The cost of the audit depends on a variety of factors such as the size of the organisation or the certification body chosen for example.

RSPO Membership fees can be found at http://www.rspo.org/en/how_to_apply and are as follows:

Membership	Fee
Ordinary Member	€2,000 per year
Ordinary Member (small grower < 500 ha)	€500 per year
Affiliate Member	€250 per year
Supply Chain Associate	€100 per year

Palm oil trading fees amount to $2/MT for administrative costs and to $1/MT for contribution to RSPO.

Trademark license compensation schedule is set by the RSPO Executive Board every year. Until July 1st, 2012, all trademark license compensations had been waived. No information regarding current trademark license compensation has been found.

For the Book and Claim mechanism, the certification cost includes GreenPalm membership ($500, except for RSPO members, GreenPalm Claim validation audit (each year 10% of all buyers are audited) and fees ($2/MT for GreenPalm fee and to $1/MT for contribution to RSPO).

For smallholders, the RSPO sets up a working group to establish an escrow fund for independent payment and selection of certification body including mechanisms to share the costs of certification through the supply chain. The RSPO also establishes a capital fund to encourage the independent smallholders to be certified (the fund is made of the money raised on tradable certificate and contribution from RSPO members).

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Annex 4. Control points for PEF and OEF requirements

Table 21: Requirements and control points for PEF studies

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
1 – General approach					
A PEF study shall be based on a life-cycle approach.	*General requirement that cannot be translated in a list of specific control point (i.e. "box-ticking" approach not possible)*	> Check in the PEF report > Check in the PEF report vs. PEFCR	Perform a global assessment of the compliance of the PEF study under consideration with the PEF guidance requirements and the PEFCR requirements.	LCA methodology and practice	Compliance with this requirement is based on the level of compliance of the PEF study with more specific PEF/PEFCR requirements detailed below as well as verifiers' judgment. The key competence to verify this requirement is "LCA methodology and practice" but competences in "Review, verification and audit practice" and "Technologies or other activities relevant to the PEF study" may also be required
1.1 – Principles					
The following principles shall be observed 1. Relevance; 2. Completeness; 3. Consistency; 4. Accuracy; 5. Transparency.	idem	idem	idem	idem	idem
3.1 – Goal definition					
PEF study shall include several items (e.g. Intended application; Target audience)	Are all the necessary items for "goal definition" included in the PEF report?	> Check in the PEF report	Carry out a simple check of the presence of the required items – i.e. check whether these items are specified under the section "Goal of the study" of the PEF main report.	Audit practice	The verification performed here is not a judgment on the appropriateness of the information.
4.1 – Scope definition					
The scope definition for a PEF study shall be in line with the defined goals.	*General requirement that cannot be translated in a predetermined list of specific control point (i.e. "box-ticking" approach not possible)*	> Check in the PEF report > Check in the PEF report vs. PEFCR	Evaluate if the scope definition of the PEF study is in line with defined goals. For instance, the system boundaries must be consistent with the reasons for carrying the study.	LCA methodology and practice	Compliance with this requirement is highly dependent on the stated goals of the PEF study and the scope defined in the PEFCR (which will depend on the product category). Some cases of goal/scope non-alignment may be relatively obvious, as for instance: • The target audience are the final consumers but a the scope of the study is cradle-to-gate (use phase omitted) • A PEF performance tracking report not taking into account some major changes made to the product. In other cases, it may be much more subtle. Therefore, compliance with this requirement is essentially based on verifiers' judgment.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
The scope definition for a PEF shall include several items (Unit of analysis and reference flow; System boundaries, etc.)	Are all the necessary items of "scope definition" included in the PEF report?	> Check in the PEF report	Carry out a simple check of the presence of the required items - i.e. check whether these items are specified under the section "Scope of the study" of the PEF main report.	Audit practice	The verification performed here is not a judgment on the appropriateness of the information.
4.2 – Unit of analysis and reference flow					
The unit of analysis for a PEF study shall be defined according to several aspects (what, how much, how well, how long, and NACE code). The PEFCRs shall specify the unit(s) of analysis.	Is the unit of analysis specified in the PEF report in line with the PEFCR requirement?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check that all required aspects (what, how much, etc.) are specified under the section "Scope of the study" of the PEF main report. Check whether the unit of analysis mentioned in the PEF main report is similar to the PEFCR requirement	Audit practice	Verification activities for this requirement are straightforward if the PEFCR has completely defined the unit of analysis. However, if some vagueness remains in the PEFCR definition competence in "LCA methodology and practice" may be necessary to ensure that the unit of analysis is valid.
An appropriate reference flow shall be determined in relation to the unit of analysis.	Is the reference flow specified in the PEF report in line with the PEFCR requirement?	> Check in the PEF report vs. PEFCR	Check whether the reference flow used in the PEF study is compliant with the PEFCR requirement.	Audit practice	If the PEFCR provides a fixed amount to be used as a reference flow such as "80 g of detergent powder for a wash" or "160g of polyester for a T shirt", then the verification is straight forward: the reference flow mentioned in the PEF report must be strictly similar to the PEFCR requirement. However if the PEFCR only refer to a concept such as "a dose" for detergent or "size L" for a T shirt with no reference to a quantified amount, then additional verification activities are required to ensure that the amount used in the LCA is valid and reliable. In this case competence related to "sector, technology, process relevant to the product" may be required.
The quantitative input and output data collected in support of the analysis shall be calculated in relation to this flow.	Are all the input and/or output data properly adapted (with scaling, aggregation or other forms of mathematical treatment) to the unit of analysis and reference flow?	> Check in the data management plan (if it exists) OR > Check available calculation documents	*If the operator has set up a data management plan for the PEF study* • Verify the existence of such a file • Check the calculations made to adapt input data to the reference flow *If the operator has NOT set up a data management plan for the PEF study* • Verify the existence of documents presenting the calculations performed (internal working documents provided by the team in charge of the PEF study) • Check the calculations made to adapt input data to the reference flow	Audit practice	Verification performed here focus on mathematical checking (correct formulas and no mistakes in calculations). Appropriateness of input data is addressed in another requirement. Audit practice primarily required but depending on the product category, competences in "LCA methodology and practice" and "Technologies or other activities relevant to the PEF study" may also be required. This depends on the level of complexity of the calculations and the underlying methodological choices made to perform the adaptations. Verification coverage (% of calculations verified) could depend on the contribution of the input data used in these calculations to the various EF impact categories.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
		> Check in the PEF report	Check that the data/assumptions/calculations (made to adapt input data to the reference flow) are properly described (i.e. similar to data management plan or other calculation documents) under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report.	Audit practice	
		> Check the modelling in the LCA tool	Check that the formulas/parameters used to adapt input data to the reference flow are properly implemented in the LCA tool and in line with what is presented in the PEF main report.	LCA methodology and practice	
	Do the results provided in the PEF report explicitly refer to one unit of analysis?	> Check in the PEF report	Check whether the unit of analysis is specified on all graphs, figures, tables, etc. presenting the results.	Audit practice	
4.3 – System boundaries					
The system boundary shall be defined following general supply-chain logic, as appropriate to the intended application of the study. The PEFCR shall specify the system boundaries for product category PEF studies.	Are the system boundaries specified in the PEF report in line with the PEFCR?	> Check in the PEF report vs. PEFCR	Check if the system boundaries, mentioned under the section "Scope of the study" of the PEF main report, are compliant with PEFCR requirements.	Audit practice	Verification activities for this requirement are straightforward if the PEFCR has completely defined the system boundaries. However, if some vagueness remains in the PEFCR competence in "LCA methodology and practice" may be necessary to ensure that the scope is valid.
The system boundaries shall include all processes linked to the product supply chain relative to the unit of analysis.		> Check in the PEF report vs. PEFCR	Check if all the processes mentioned in the PEFCR are at least mentioned in the PEF report in the sub-section describing all the unit process data collected (which should be under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report).	LCA methodology and practice	
The processes included in the system boundaries shall be divided into foreground processes and background processes.	Are the processes divided into foreground and background processes?	> Check in the PEF report (vs. PEFCR if applicable)	Check if all processes presented in the PEF report are separated between foreground and background processes (and in line with PEFCR, if applicable).	Audit practice	The verification performed here is not a judgment on the appropriateness of the foreground/background distinction.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
	Is the foreground/background distinction appropriate?	> Check in the PEF report >Check in available documentary evidence	Check if the distinction is made appropriately with the PEF guidance definitions of foreground/background, and if applicable with the PEFCR. *If necessary, verification of the relevance of choices regarding the foreground/background distinction:* Documentary checks – i.e. request for documents justifying the fact that some processes have been identified as background processes.	LCA methodology and practice	
4.3 – Offsets					
Offsets shall not be included in the PEF study. However, they may be reported separately as "additional environmental information".	Are the offsets, if any, reported in the right section of the report?	> Check in the PEF report	If applicable, ensure that this point is specified under the item "Additional environmental information" in the section "Calculating PEF impact assessment results" of the PEF main report and that it is not presented in another section or included in the total results.	Audit practice	
	Are the offsets data, if any, reliable and valid?	> Check the modelling in the LCA tool	If applicable, check that the data and/or calculations are properly implemented in the LCA tool so that offsets are accounted for separately. If applicable, check that offset figures presented in the report are valid compared to LCA model.	LCA methodology and practice	
4.4 – Selection of EF impact categories and methods					
For a PEF study, all of the specified default EF impact categories and related IA models shall be applied. PEFCRs shall specify and justify any exclusion of the default EF impact categories.	Are categories/Models/Indicators presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	Check whether the EF impact categories, models, and indicators presented under the section "Scope of the study" of the PEF Main Report are in line with PEFCR requirements.	Audit practice	
	Are categories/Models/Indicators implemented in the LCA tool in line with PEFCR requirements?	> Check in the settings of the LCA tool	Check whether the PEFCR-required Impact Assessment Models are available in the LCA tool and are used for the calculation of the PEF profile.	LCA methodology and practice	If the tool is an "official" EU tool (such has the SME tool to be developed by the EC for the PEF pilot) or a tool endorsed by the EU, this verification could be done once and not for each PEF study.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
Any exclusion shall be explicitly documented, justified, reported in the PEF report and supported by appropriate documents. The influence of any exclusion on the final results, especially related to limitations in terms of comparability with other PEF studies, shall be discussed in the interpretation phase and reported. Such exclusions are subject to review.	If applicable, are the exclusions of some impact category reported and justified in the PEF report?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check whether the exclusions are mentioned under the sections "Scope of the study" and "Calculating PEF impact assessment results". Check whether the influence of exclusions, if any, is discussed under the section "Interpreting PEF results" of the PEF main report. Check if excluded indicators are in line with PEFCR requirements. Check if justifications provided are in line with justifications provided in the PEFCR.	Audit practice	Verification activities for this requirement are straightforward if the exclusions and their justifications are completely in line with the PEFCR. If some deviations from the PEFCR are observed, additional competences in "Review, verification and audit practice" and "Technologies or other activities relevant to the PEF study" may also be required.
4.5 – Selecting additional environmental information					
Relevant environmental aspects shall be additionally included under "additional environmental information". The supporting models of these additional categories shall be clearly referenced and documented with the corresponding indicators. The PEFCR shall specify and justify additional environmental information that is to be included in the PEF study. Such additional information shall be reported separately from the life-cycle-based PEF results, with all methods and assumptions clearly documented.	Is additional environmental information presented in the PEF report in line with PEFCR requirements?	> If applicable, check in the PEF report vs. PEFCR	If applicable, check whether these points are mentioned under the section "Calculating PEF impact assessment results" of the PEF main report and are in line with PEFCR requirement.	Audit practice	
Additional environmental information shall be: Based on information that is substantiated; Specific, accurate and not misleading; Relevant to the particular product category; etc.	*Specific control points to be defined on case-by-case basis depending on additional environmental information to be provided*	> If applicable, check in the PEF report	*Verification activities depends on the type of additional environmental information provided*	LCA methodology and practice	
		> If applicable, check the modelling in the LCA tool	*Verification activities depends on the type of additional environmental information provided*	LCA methodology and practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
4.6 – Assumptions/limitations					
All assumptions shall be transparently reported. The PEFCRs shall report product category-specific limitations and define the assumptions necessary to overcome the limitations.	Are all the assumptions made for the purpose of the PEF study reported as such in the PEF report?	> Check in the PEF report > Check in cited sources	Verify that assumptions are mentioned in all required sections (i.e. summary, PEF main report, Annex). For each data presented as an input data, verify if a specific source or the indication "assumption" is specified in the PEF report Check that no data is improperly described as coming from a documentary source or from a personal communication whereas it is only an assumption: • Look for the data in cited sources. • Review data collection procedures to ensure that the fact that a value is an assumption is not omitted in the data collection and data consolidation processes.	Audit practice	See also requirement: "The sources of the data used shall be clearly documented and reported in the PEF report."
		> Check in the PEF report vs. the data management plan (if it exists) OR > Check in the PEF report vs. available calculation documents	*If the operator has set up a data management plan for the PEF study:* Check that the data presented as assumptions in the data management plan are described as such under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report. *If the operator has NOT set up a data management plan for the PEF study:* Check that the data presented as assumptions in the calculation documents are described as such under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report.	Audit practice	
		> Check in the PEF report > Check in the PEF report vs. PEFCR	Verify whether the justification for the assumption is reasonable Verify that specific assumptions of the product category defined as requirements in the PEFCR are mentioned in the PEF report.	LCA methodology and practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
		> Check the modelling in the LCA tool	Check whether the PEFCR-specific assumptions are properly implemented in the LCA tool and are used for the calculation of the PEF profile. Check whether other assumptions cited in the PEF report are properly implemented in the LCA tool	LCA methodology and practice	
All limitations shall be transparently reported.	Are all the known limitations of the PEF study reported as such in the PEF report?	> Verify the presence of information on limitations in the PEF report > Check in the PEF report vs. PEFCR	Verify that limitations are mentioned in all required sections (i.e. summary, PEF main report). Verify that all PEFCR-specific limitations are properly described	Audit practice	
		> Check in the PEF report	Check whether the limitations and their influence on the results are properly and sufficiently explained and discussed.	LCA methodology and practice	
5.1 – Resource Use and Emissions Profile					
All resource use and emissions associated with the life-cycle stages included in the defined system boundaries shall be included in the Resource Use and Emissions Profile.	Is the Resource Use and Emissions Profile presented in the PEF report?	> Check in the PEF report	Check whether the Resource Use and Emissions Profile is presented in the Annex of the PEF Main Report; or in case of sensitive information, in the Confidential Report.	Audit practice	
	Is the Resource Use and Emissions Profile accurate and valid?	> Check in the results in the LCA tool	Check if the global Life Cycle Inventory of the system calculated within LCA tool is strictly similar to the reported Resource Use and Emissions Profile. Perform cross-calculations on the reported Resource Use and Emissions Profile.	LCA methodology and practice	Cross-calculations could be made using another LCA tool. An option could be to implement a vey simplified modelling of the product to check whether the order of magnitude of the flows of the Resource Use and Emissions Profile is similar or possibly pinpoint miscalculations.
The flows shall be grouped into "elementary flows" and "non-elementary (i.e. complex) flows".	Are the flows grouped into elementary and non-elementary flows?	> Check in the PEF report	Check if the reporting format is compliant with PEF requirements. Check if all flows presented in the PEF report are separated between elementary flows and non-elementary flows.	Audit practice	The verification performed here is not a judgment on the appropriateness of the elementary/non-elementary distinction.
All non-elementary flows in the Resource Use and Emissions Profile shall be transformed into elementary flows.	Are there any non-elementary flows remaining?	> Check in the PEF report > Check in the LCA tool	Review of the Resource Use and Emissions Profile in relation with the unit processes included in the scope of the study.	LCA methodology and practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
5.4 – Data for Resource Use and Emissions Profile					
All resource use and emissions associated with the life-cycle stages included in the defined system boundaries shall be included in the Resource Use and Emissions Profile (Raw material; Capital goods; Production; Use stage; etc.). The PEFCRs should provide one or more examples for compiling the Resource Use and Emissions Profile. For modelling processes/activities within the core module (i.e. gate-to-gate stage), the PEFCRs shall also specify: Processes/activities included; Specifications for compiling data for key processes,etc. If the PEFCRs also require deviations from the default system boundary the PEFCRs shall specify how material/energy balances in the Resource Use and Emissions Profile shall be accounted for.	*General requirement that cannot be translated in a predetermined list of specific control point (i.e. "Box-ticking" approach not possible)*	> Check in the PEF report > Check in the PEF report vs. PEFCR	Evaluate if the Resource Use and Emissions Profile of the PEF study is in line with the scope i.e. all processes and related data falling in the scope of the study are included in the Resource Use and Emissions Profile. In particular, review the data listed under the item "Description and documentation of all unit process data collected" in the section "Compiling and recording the Resource Use and Emissions Profile"; or in case of sensitive information, in the Confidential Report. If applicable, check if the data used for Data for Resource Use and Emissions Profile are compliant with PEFCR requirements.	LCA methodology and practice	Compliance with this requirement is highly dependent on the scope defined in the PEFCR (which will depend on the product category).
Capital goods shall be considered for inclusion in the Resource Use and Emissions Profile.	Are clarifications on the way capital goods are handled provided in the PEF report? Are the capital goods aspects in line with the PEFCR?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check whether inclusion/exclusion of capital goods is specified under the item "system boundaries" in the section "Scope of the study" of the PEF Main report.	Audit practice	
Linear depreciation shall be used for the capital goods. The expected service life of the capital goods shall be taken into account.	Is linear depreciation used for the quantification of the impacts of capital goods?	> Check the modelling in the LCA tool	Check in the LCA tool if the footprint calculations for capital goods are based on a linear depreciation – i.e. life cycle impacts of a given capital good brought back to the reference flow using the expected number of year of service.	LCA methodology and practice	Related to the requirement "reference flow"
	Is the number of years of expected service used for each capital good reliable and valid?	> Check in PEF report vs. available documentary evidence	Verification of data regarding the time of expected service could be based on Documentary checks – i.e. request for documents justifying the expected number of years of service (e.g. Material Technical Data Sheets, Maintenance data sheets, other technical documentation provided by suppliers who sold the goods)	Audit practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
5.4.5 – Use phase					
The PEFCRs shall specify: • The use-stage scenarios to be included in the study, if any; • The time span to be considered for the use stage.	If applicable, is the use phase scenario presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	If applicable, check whether the use scenario (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) is similar to the PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report	Audit practice	
		> Check the modelling in the LCA tool	If applicable, check whether the PEFCR-specific use scenario is properly implemented in the LCA tool and is used for the calculation of the PEF profile.	LCA methodology and practice	
5.4.6 – Logistics					
Several transport parameters shall be taken into account (transport type, loading rate, number of empty returns, etc.). The impacts due to transport shall be expressed in tkm for goods and person-km for passenger transport. The PEFCRs shall specify transport, distribution and storage scenarios to be included in the study, if any.	If applicable, are the transportation scenarios presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	If applicable, check whether the transportation scenarios (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) are in line with PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report	Audit practice	
		If applicable, check in the LCA tool	If applicable, check whether the transportation scenario are properly implemented in the LCA tool and are used in the calculations of the PEF profile.	LCA methodology and practice	
5.4.7 – End-of-life stage					
Waste flows arising from processes included in the system boundaries shall be modelled to the level of elementary flows. The end-of-life scenarios, if any, shall be defined in the PEFCRs. These scenarios shall be based on current (year of analysis) practice, technology and data.	Are the end-of-life scenario presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR > Check in the PEF report vs. PEFCR	Review of the Resource Use and Emissions Profile in to ensure that all non-elementary waste flows have been converted to elementary flows. Check whether the end-of-life scenarios (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) are in line with PEFCR requirements. Check whether the explanations and sources from the PEFCR are presented in the PEF report	Audit practice	See also requirement on the transformation of non-elementary waste flows. Verification activities for this requirement are straightforward if the PEFCR has completely defined the end-of-life aspects. However, if some vagueness remains in the PEFCR definition competence in "LCA methodology and practice" may be necessary to ensure that the end-of-life stage has been taken into account properly. The complexity of the verification depends on the PEFCR requirements. For instance if the PEFCR has defined generic end-of-life scenarios at EU-27 level or specific scenarios for each country.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
		> Check the modelling in the LCA tool	Check whether the end-of-life scenario are properly implemented in the LCA tool and are used in the calculations of the PEF profile.	LCA methodology and practice	
5.4.8 – Electricity use					
For electricity from the grid consumed upstream or within the defined PEF boundary, supplier-specific data shall be used if available. If supplier-specific data is not available, country-specific consumption-mix data shall be used of the country in which the life cycle stages occur. For electricity consumed during the use stage of products, the energy mix shall reflect ratios of sales between countries or regions. Where such data are not available, the average EU consumption mix, or otherwise most representative mix, shall be used.	Are all the electricity aspects presented in the PEF report?	> Check in the PEF report	>Check whether the information on electricity are presented in the PEF main report under the section "scope of the study"	Audit practice	
	Are electricity consumption LCIs (i.e. unit modules) presented in the report reliable and valid?	> If necessary, check in available documentary evidence	*Verification of LCI/LCIA data for one kWh of electricity could be based on:* • Documentary checks - i.e. request for documents from electricty suppliers (for life cycle steps before consumption phase) • Cross-check comparison with public sources on electricity mixes and their environmental impacts - e.g. to check if the LCI/LCIA data for one kWh of electricity is realistic • Verification of the data used for country specific consumption mix i.e. comparison with available public sources	Audit practice	
		> Check the modelling in the LCA tool	Check whether the electricity LCIs that are presented in the report are properly implemented in the LCA tool and are used in the calculations of the PEF profile.	LCA methodology and practice	
It shall be guaranteed that the renewable electricity is not double counted. A statement of the supplier shall be included as an annex to the PEF report.	If applicable, is the statement from the supplier available?	> Check in PEF report	Check whether the necessary document is provided in annex of the PEF main report.	Audit practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
5.4.9 – Biogenic carbon removals and emissions					
Removals and emissions of biogenic carbon sources shall be kept separated in the Resource Use and Emissions Profile.	Is the biogenic Carbon separated in the Resource Use and Emissions Profile?	> Check in the PEF report	If applicable, carry out a simple check to ensure that biogenic carbon is not included in the Resource Use and Emissions Profile.	Audit practice	The importance of this requirement is highly dependent on the product category (i.e. biomass derived product or not).
	Are the removals and emissions, if any, reported in the right section of the report?	> Check in the PEF report	If applicable, check whether this point is specified under the item "Additional environmental information" in the section "Calculating PEF impact assessment results" of the PEF main report and that is not presented in another section or included in other results (i.e. tables and charts).	Audit practice	
5.4.9 – Direct and indirect land use change (impact for climate change); Accounting for Renewable Energy Generation; Temporary (carbon) storage and delayed emissions					
Requirements for theses aspects are advanced methodological rules that may be applicable for a limited number of product categories.	*Control points to be defined on a case-by-case basis depending on the product category and the PEFCR.*	> Check in PEF report > Check in PEF report vs. PEFCR >Check the modelling in the LCA tool	*Depends on the product category and the PEFCR.*	LCA methodology and practice	The importance of these requirements is highly dependent on the product category (e.g. agriculture derived product or not, lifetime and composition of the product). Experience of PCR development in the context of French initiative on environmental labelling reveals that in general the PCR are designed in such a way that these issues do not need to be addressed.
5.5 – Nomenclature					
All relevant resource use and emissions associated with the life-cycle stages included in the defined system boundaries shall be documented using the ILCD nomenclature and properties.	Are the resource use and emissions documented using the ILCD nomenclature?	> Check in the PEF report vs. ILCD	Check that the appropriate ILCD nomenclature is used for the resource use and emissions.	LCA methodology and practice	See also requirements 5.1 and 5.4
5.6 – Data quality requirements					
Requirements for theses aspects are advanced methodological rules that will depend on the type of specific and generic data used in a given PEF study.	*General requirement: The control points should follow the approach for data quality assessment provided in the PEF guidance.*	>Check in the PEF report >Check in the data management plan (if it exists) >Check in available data collection documents	Review of the data quality assessment. > Review of semi-quantitative assessment, check of Data Quality Rating (DQR) calculations, request for documents providing evidence for the quality level/rating > Review of the qualitative expert judgement, review of justifications	LCA methodology and practice	The importance of this requirement will depend on the level of maturity of LCA practice in the considered product category. In most advanced fields with good LCA knowledge, the PEFCR requirements may be designed in such a way that room for uncertainty is very limited.

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
5.7 – Specific data collection					
Specific data shall be obtained for all foreground processes and for background processes, where appropriate. PEFCRs shall: 1. Specify for which processes specific data shall be collected. 2. Specify the requirements for collection of specific data. 3. Define the data collection requirements on several aspects	Are the specific data specified in the PEF report ? Are the specific date specified in the PEF in line with PEFCR requirements ?	> Check in the PEF report > Check in the PEF report vs PEFCR	Check whether the specific data are listed under the item "Description and documentation of all unit process data collected" in the section "Compiling and recording the Resource Use and Emissions Profile"; or in case of sensitive information, in the Confidential Report. Check if the specific data reported in the PEF report are the one required by the PEFCR.	Audit practice	
	Are the specific data used in the PEF profile reliable and valid ?	> Check in the PEF report > Check in the PEF report vs PEFCR > Check in the data management plan or any existing data collection documents > Review data collection procedures	See verification case studies in section 5.1.2	Audit practice	This control point is at the heart of the verification. The type of verification activities depends on the nature of specific data used. Verification activities can be illustrated based on specific data requirements from existing PCRs.
	Are the specific data specified in the PEF report properly implemented in the LCA tool ?	Check the modelling in the LCA tool	Check if the specific data reported in the PEF report are strictly similar to specific data implemented in the LCA tool.	LCA methodology and practice	
5.8 – Generic data collection					
When available, sector-specific generic data shall be used instead of multi-sector generic data. All generic data shall fulfil the data quality requirements specified in this document. The sources of the data used shall be clearly documented and reported in the PEF report. The PEFCR shall specify where the use of generic data is permitted	Are the generic data specified in the PEF report? Are the generic data specified in the PEF in line with PEFCR requirements ?	> Check in the PEF report > Check in the PEF report vs PEFCR	Check whether the generic data are listed under the item "Description and documentation of all unit process data collected" in the section "Compiling and recording the Resource Use and Emissions Profile". Check whether the generic data used are strictly similar to PEFCR requirements (i.e. values cited in the PEF main report are similar to the PEFCR values.	Audit practice	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
		Check the modelling in the LCA tool	Check if the generic data reported in the PEF report are strictly similar to the generic data implemented in the LCA tool.	LCA methodology and practice	
5.9 – Dealing with Data Gaps					
Any data gaps shall be filled using the best available generic or extrapolated data. The PEFCR shall specify potential data gaps and provide detailed guidance for filling these gaps.				LCA methodology and practice	See also requirement 4.6 on assumptions/limitations
5.10 – Handling Multi functionality					
Requirements for theses aspects are advanced methodological rules that will depend on the product category and the PEFCR.	Is the required information properly presented in the PEF report?	> Check in the PEF report vs. PEFCR	Check that multi-functionality solutions used in the PEF study and presented in the PEF report under the section "Scope of the study" in item "Treatment of any multi-functionality issues encountered in the PEF modelling activity." Check that multi-functionality solutions presented are in line with PEFCR requirements	LCA methodology and practice	
	Are the calculations correct? :	> Check in the PEF report	*Verification activities to to be defined on a case-by-case basis depending on the product category and the PEFCR.*	LCA methodology and practice	
		> Check in the LCA tool	Check that the rules and formula are properly implemented in the LCA tool and are similar to the information provided in the PEF report.	LCA methodology and practice	
6.1 – Environmental Footprint Impact Assessment					
EF impact assessment shall include a classification and characterisation of the Product Environmental Footprint flows.	Prerequisite: Are the required EF impact assessment models implemented in the LCA tool?	Check in the settings of the LCA tool	Check whether the PEFCR-required Impact Assessment Models are properly implemented in the LCA tool and are used for the calculation of the PEF profile.		See requirement 4.4 Selection of EF impact categories and methods If the tool is an "official" EU tool (such has the SME tool to be developed by the EC for the PEF pilot) or a tool endorsed by the EU, this verification could be done once and not for each PEF study
6.1.1 – Classification					
All inputs/outputs inventoried during the compilation of the Resource Use and Emissions Profile shall be assigned to the EF impact categories to which they contribute.	Are elementary flows of the Resource Use and Emissions Profile properly assigned to the EF impact categories to which they contribute?	Check in the settings of the LCA tool	Check whether the PEFCR-required Impact Assessment Models are properly implemented in the LCA tool and are used for the calculation of the PEF profile.		idem

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Competence of verifier	Comments
6.1.2 – Characterisation					
All classified inputs/outputs in each EF impact category shall be assigned characterisation factors representing the contribution per input/output unit to the category.	Are the characterisation factors appropriate?	Check in the settings of the LCA tool	Check whether the PEFCR-required Impact Assessment Models are properly implemented in the LCA tool and are used for the calculation of the PEF profile.		idem
6.2.1 – Normalisation					
If normalisation is applied, the normalised environmental footprint results shall be reported under "additional environmental information", with all methods and assumptions documented.	If applicable, is the normalisation presented in the PEF report?	> Check in the PEF report	If applicable, check that normalisation information is presented under the required sections (i.e "Scope of the study" and "Calculating PEF impact assessment results"	Audit practice	
	Are normalisation factors relevant and valid?	> Check in the PEF report	Verify whether the factors used for normalisation are appropriate (i.e. review sources and justifications)	LCA methodology and practice	
The application of normalisation shall be consistent with the defined goals and scope of the study, including the intended applications.	Is the normalisation consistent with the defined goals and scope of the study ?	> Check in the PEF report	Verify whether justification for weighting factors in line with goal and scope		
6.2.2 – Weighting					
If weighting is applied, the methods and results shall be reported under "additional environmental information".		> Check in the PEF report	Verify whether justification for weighting factors in line with goal and scope	LCA methodology and practice	
Results of the EF impact assessment prior to weighting shall be reported alongside weighted results.		> Check in the PEF report	Verify whether justification for weighting factors in line with goal and scope	Audit practice	
The application of weighting steps in PEF studies shall be consistent with the defined goals and scope of the study, including the intended applications.		> Check in the PEF report		LCA methodology and practice	
7.1 – Interpretation of results; 7.2 – Model robustness; 7.3 – Identification of Hotspots; 7.4 – Estimation of uncertainty; 7.5 – Conclusions, Recommendations, and Limitations					
			Expert judgment	LCA methodology and practice	

Annex 5. Proposition for basic, intermediate and advanced PEF and PEFCR methodological requirements

Table 22: Proposition for basic, intermediate, and advanced PEF and PEFCR methodological requirements

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
3.1 – Goal definition						
PEF study shall include several items (e.g. Intended application; Target audience)	Are all the necessary items for "goal definition" included in the PEF report?	> Check in the PEF report	Carry out a simple check of the presence of the required items – i.e. check whether these items are specified under the section "Goal of the study" of the PEF main report.	**Basic verification - Content of the PEF report**		
4.1 – Scope definition						
The scope definition for a PEF shall include several items (Unit of analysis and reference flow; System boundaries, etc.)	Are all the necessary items of "scope definition" included in the PEF report?	> Check in the PEF report	Carry out a simple check of the presence of the required items - i.e. check whether these items are specified under the section "Scope of the study" of the PEF main report.	**Basic verification - Content of the PEF report**		
4.2 – Unit of analysis and reference flow						
The unit of analysis for a PEF study shall be defined according to several aspects (what, how much, how well, how long, and NACE code). The PEFCRs shall specify the unit(s) of analysis.	Is the unit of analysis specified in the PEF report in line with the PEFCR requirement?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check that all required aspects (what, how much, etc.) are specified under the section "Scope of the study" of the PEF main report. Check whether the unit of analysis mentioned in the PEF main report is similar to the PEFCR requirement	**Basic verification - PEFCR requirement**		
An appropriate reference flow shall be determined in relation to the unit of analysis.	Is the reference flow specified in the PEF report in line with the PEFCR requirement?	> Check in the PEF report vs. PEFCR	Check whether the reference flow used in the PEF study is compliant with the PEFCR requirement.	**Basic verification - PEFCR requirement**		

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
		> Check in the PEF report	Check that the data/assumptions/calculations (made to adapt input data to the reference flow) are properly described (i.e. similar to data management plan or other calculation documents) under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report.		**Intermediate verification - Content of PEF report**	
	Do the results provided in the PEF report explicitly refer to one unit of analysis?	> Check in the PEF report	Check whether the unit of analysis is specified on all graphs, figures, tables, etc. presenting the results.	**Basic verification - Content of the PEF report**		
4.3 – System boundaries						
The system boundary shall be defined following general supply-chain logic, as appropriate to the intended application of the study. The PEFCR shall specify the system boundaries for product category PEF studies.	Are the system boundaries specified in the PEF report in line with the PEFCR?	> Check in the PEF report vs. PEFCR	Check if the system boundaries, mentioned under the section "Scope of the study" of the PEF main report, are compliant with PEFCR requirements.	**Basic verification - PEFCR requirement**		
The system boundaries shall include all processes linked to the product supply chain relative to the unit of analysis.		> Check in the PEF report vs. PEFCR	Check if all the processes mentioned in the PEFCR are at least mentioned in the PEF report in the sub-section describing all the unit process data collected (which should be under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report).	**Basic verification - PEFCR requirement**		
The processes included in the system boundaries shall be divided into foreground processes and background processes.	Are the processes divided into foreground and background processes?	> Check in the PEF report (vs. PEFCR if applicable)	Check if all processes presented in the PEF report are separated between foreground and background processes (and in line with PEFCR, if applicable).		**Intermediate verification - Content of PEF report & PEFCR requirement**	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
	Is the foreground/background distinction appropriate?	> Check in the PEF report >Check in available documentary evidence	Check if the distinction is made appropriately with the PEF guidance definitions of foreground/background, and if applicable with the PEFCR. *If necessary, verification of the relevance of choices regarding the foreground/background distinction:* Documentary checks – i.e. request for documents justifying the fact that some processes have been identified as background processes.			**Advanced verification – LCA methodology**
4.3 – Offsets						
Offsets shall not be included in the PEF study. However, they may be reported separately as "additional environmental information".	Are the offsets, if any, reported in the right section of the report?	> Check in the PEF report	If applicable, ensure that this point is specified under the item "Additional environmental information" in the section "Calculating PEF impact assessment results" of the PEF main report and that it is not presented in another section or included in the total results.		**Intermediate verification - Content of the PEF report**	
4.4 – Selection of EF impact categories and methods						
For a PEF study, all of the specified default EF impact categories and related IA models shall be applied. PEFCRs shall specify and justify any exclusion of the default EF impact categories.	Are categories/Models/Indicators presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	Check whether the EF impact categories, models, and indicators presented under the section "Scope of the study" of the PEF Main Report are in line with PEFCR requirements.	Basic verification - PEFCR requirement		

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
Any exclusion shall be explicitly documented, justified, reported in the PEF report and supported by appropriate documents. The influence of any exclusion on the final results, especially related to limitations in terms of comparability with other PEF studies, shall be discussed in the interpretation phase and reported. Such exclusions are subject to review.	If applicable, are the exclusions of some impact category reported and justified in the PEF report?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check whether the exclusions are mentioned under the sections "Scope of the study" and "Calculating PEF impact assessment results". Check whether the influence of exclusions, if any, is discussed under the section "Interpreting PEF results" of the PEF main report. Check if excluded indicators are in line with PEFCR requirements. Check if justifications provided are in line with justifications provided in the PEFCR.		Intermediate verification - Content of the PEF report (& LCA methodology, if not straightforward)	
4.5 – Selecting additional environmental information						
Relevant environmental aspects shall be additionally included under "additional environmental information". The supporting models of these additional categories shall be clearly referenced and documented with the corresponding indicators. The PEFCR shall specify and justify additional environmental information that is to be included in the PEF study. Such additional information shall be reported separately from the life-cycle-based PEF results, with all methods and assumptions clearly documented.	Is additional environmental information presented in the PEF report in line with PEFCR requirements?	> If applicable, check in the PEF report vs. PEFCR	If applicable, check whether these points are mentioned under the section "Calculating PEF impact assessment results" of the PEF main report and are in line with PEFCR requirement.		Intermediate verification - Content of the PEF report & PEFCR requirement	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
Additional environmental information shall be: Based on information that is substantiated; Specific, accurate and not misleading; Relevant to the particular product category; etc.	*Specific control points to be defined on case-by-case basis depending on additional environmental information to be provided*	> If applicable, check in the PEF report	*Verification activities depends on the type of additional environmental information provided*			Advanced verification - LCA methodology
4.6 – Assumptions/limitations						
All assumptions shall be transparently reported. The PEFCRs shall report product category-specific limitations and define the assumptions necessary to overcome the limitations.	Are all the assumptions made for the purpose of the PEF study reported as such in the PEF report?	> Check in the PEF report > Check in cited sources	Verify that assumptions are mentioned in all required sections (i.e. summary, PEF main report, Annex). For each data presented as an input data, verify if a specific source or the indication "assumption" is specified in the PEF report Check that no data is improperly described as coming from a documentary source or from a personal communication whereas it is only an assumption: • Look for the data in cited sources. • Review data collection procedures to ensure that the fact that a value is an assumption is not omitted in the data collection and data consolidation processes.	Basic verification - Content of the PEF report		
		> Check in the PEF report > Check in the PEF report vs. PEFCR	Verify whether the justification for the assumption is reasonable Verify that specific assumptions of the product category defined as requirements in the PEFCR are mentioned in the PEF report.		Intermediate verification - Content of the PEF report & PEFCR requirement	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
All limitations shall be transparently reported.	Are all the known limitations of the PEF study reported as such in the PEF report?	> Verify the presence of information on limitations in the PEF report > Check in the PEF report vs. PEFCR	Verify that limitations are mentioned in all required sections (i.e. summary, PEF main report). Verify that all PEFCR-specific limitations are properly described	Basic verification - Content of the PEF report & PEFCR requirement		
		> Check in the PEF report	Check whether the limitations and their influence on the results are properly and sufficiently explained and discussed.		Intermediate verification - LCA methodology	
5.1 – Resource Use and Emissions Profile						
All resource use and emissions associated with the life-cycle stages included in the defined system boundaries shall be included in the Resource Use and Emissions Profile.	Is the Resource Use and Emissions Profile presented in the PEF report?	> Check in the PEF report	Check whether the Resource Use and Emissions Profile is presented in the Annex of the PEF Main Report; or in case of sensitive information, in the Confidential Report.	Basic verification - Content of the PEF report & PEFCR requirement		
The flows shall be grouped into "elementary flows" and "non-elementary (i.e. complex) flows".	Are the flows grouped into elementary and non-elementary flows?	> Check in the PEF report	Check if the reporting format is compliant with PEF requirements. Check if all flows presented in the PEF report are separated between elementary flows and non-elementary flows.		Intermediate verification - Content of the PEF report	
All non-elementary flows in the Resource Use and Emissions Profile shall be transformed into elementary flows.	Are there any non-elementary flows remaining?	> Check in the PEF report > Check in the LCA tool	Review of the Resource Use and Emissions Profile in relation with the unit processes included in the scope of the study.		Intermediate verification - LCA methodology	
5.4 – Data for Resource Use and Emissions Profile						
Capital goods shall be considered for inclusion in the Resource Use and Emissions Profile.	Are clarifications on the way capital goods are handled provided in the PEF report? Are the capital goods aspects in line with the PEFCR?	> Check in the PEF report > Check in the PEF report vs. PEFCR	Check whether inclusion/exclusion of capital goods is specified under the item "system boundaries" in the section "Scope of the study" of the PEF Main report.		Intermediate verification - Content of the PEF report & PEFCR requirement	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
Linear depreciation shall be used for the capital goods. The expected service life of the capital goods shall be taken into account.	Is linear depreciation used for the quantification of the impacts of capital goods?	> Check the modelling in the LCA tool	Check in the LCA tool if the footprint calculations for capital goods are based on a linear depreciation – i.e. life cycle impacts of a given capital good brought back to the reference flow using the expected number of year of service.			Advanced verification - Content of the PEF report
5.4.5 – Use phase						
The PEFCRs shall specify: • The use-stage scenarios to be included in the study, if any; • The time span to be considered for the use stage.	If applicable, is the use phase scenario presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	If applicable, check whether the use scenario (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) is similar to the PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report		Intermediate verification - PEFCR requirement	
5.4.6 – Logistics						
Several transport parameters shall be taken into account (transport type, loading rate, number of empty returns, etc.). The impacts due to transport shall be expressed in tkm for goods and person-km for passenger transport. The PEFCRs shall specify transport, distribution and storage scenarios to be included in the study, if any.	If applicable, are the transportation scenarios presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR	If applicable, check whether the transportation scenarios (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) are in line with PEFCR requirements. If applicable, check whether the explanations and sources from the PEFCR are presented in the PEF report		Intermediate verification - PEFCR requirement	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
5.4.7 – End-of-life stage						
Waste flows arising from processes included in the system boundaries shall be modelled to the level of elementary flows. The end-of-life scenarios, if any, shall be defined in the PEFCRs. These scenarios shall be based on current (year of analysis) practice, technology and data.	Are the end-of-life scenario presented in the PEF report in line with PEFCR requirements?	> Check in the PEF report vs. PEFCR > Check in the PEF report vs. PEFCR	Review of the Resource Use and Emissions Profile in to ensure that all non-elementary waste flows have been converted to elementary flows. Check whether the end-of-life scenarios (mentioned under the section "Compiling and recording the Resource Use and Emissions Profile" of the PEF main report) are in line with PEFCR requirements. Check whether the explanations and sources from the PEFCR are presented in the PEF report		Intermediate verification - PEFCR requirement	
5.4.8 – Electricity use						
For electricity from the grid consumed upstream or within the defined PEF boundary, supplier-specific data shall be used if available. If supplier-specific data is not available, country-specific consumption-mix data shall be used of the country in which the life cycle stages occur. For electricity consumed during the use stage of products, the energy mix shall reflect ratios of sales between countries or regions. Where such data are not available, the average EU consumption mix, or otherwise most representative mix, shall be used.	Are all the electricity aspects presented in the PEF report?	> Check in the PEF report	>Check whether the information on electricity are presented in the PEF main report under the section "scope of the study"			Advanced verification - PEFCR requirement

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
It shall be guaranteed that the renewable electricity is not double counted. A statement of the supplier shall be included as an annex to the PEF report.	If applicable, is the statement from the supplier available?	> Check in PEF report	Check whether the necessary document is provided in annex of the PEF main report.		Advanced verification - Content of the PEF report	
5.4.9 – Biogenic carbon removals and emissions						
Removals and emissions of biogenic carbon sources shall be kept separated in the Resource Use and Emissions Profile.	Is the biogenic Carbon separated in the Resource Use and Emissions Profile?	> Check in the PEF report	If applicable, carry out a simple check to ensure that biogenic carbon is not included in the Resource Use and Emissions Profile.		Advanced verification – Content of the PEF report	
	Are the removal and emissions of biogenic carbon, if any, reported in the right section of the report?	> Check in the PEF report	If applicable, check whether this point is specified under the item "Additional environmental information" in the section "Calculating PEF impact assessment results" of the PEF main report and that is not presented in another section or included in other results (i.e. tables and charts).		Advanced verification – Content of the PEF report	
5.4.9 – Direct and indirect land use change (impact for climate change); Accounting for Renewable Energy						
Requirements for theses aspects are advanced methodological rules that may be applicable for a limited number of product categories.	*Control points to be defined on a case-by-case basis depending on the product category and the PEFCR.*	> Check in PEF report > Check in PEF report vs. PEFCR >Check the modelling in the LCA tool	*Depends on the product category and the PEFCR.*			Advanced verification – LCA methodology
5.5 – Nomenclature						
All relevant resource use and emissions associated with the life-cycle stages included in the defined system boundaries shall be documented using the ILCD nomenclature and properties.	Are the resource use and emissions documented using the ILCD nomenclature?	> Check in the PEF report vs. ILCD	Check that the appropriate ILCD nomenclature is used for the resource use and emissions.		Intermediate verification – LCA methodology	

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
5.9 – Dealing with Data Gaps						
Any data gaps shall be filled using the best available generic or extrapolated data. The PEFCR shall specify potential data gaps and provide detailed guidance for filling these gaps.						
5.10 – Handling Multi functionality						
Requirements for theses aspects are advanced methodological rules that will depend on the product category and the PEFCR.	Is the required information properly presented in the PEF report?	> Check in the PEF report vs. PEFCR	Check that multi-functionality solutions used in the PEF study and presented in the PEF report under the section "Scope of the study" in item "Treatment of any multi-functionality issues encountered in the PEF modelling activity." Check that multi-functionality solutions presented are in line with PEFCR requirements			Advanced verification - LCA methodology
6.2.1 – Normalisation						
If normalisation is applied, the normalised environmental footprint results shall be reported under "additional environmental information", with all methods and assumptions documented.	If applicable, is the normalisation presented in the PEF report?	> Check in the PEF report	If applicable, check that normalisation information is presented under the required sections (i.e "Scope of the study" and "Calculating PEF impact assessment results"	Basic verification - LCA methodology		
	Are normalisation factors relevant and valid?	> Check in the PEF report	Verify whether the factors used for normalisation are appropriate (i.e. review sources and justifications)		Intermediate verification - LCA methodology	
The application of normalisation shall be consistent with the defined goals and scope of the study, including the intended applications.		> Check in the PEF report	Verify whether justification for weighting factors in line with goal and scope			Advanced verification - LCA methodology

Summary of requirement	Control points	Type of verification activities	Detailed description of the verification activities	Level 1	Level 2	Level 3
6.2.2 – Weighting						
If weighting is applied, the methods and results shall be reported under "additional environmental information".		> Check in the PEF report	Verify whether justification for weighting factors in line with goal and scope	Basic verification - LCA methodology		
Results of the EF impact assessment prior to weighting shall be reported alongside weighted results.		> Check in the PEF report	Verify whether EF impact assessment are reported alongside weighted results	Basic verification - LCA methodology		
The application of weighting steps in PEF studies shall be consistent with the defined goals and scope of the study, including the intended applications.		> Check in the PEF report				Advanced verification - LCA methodology
7.1 – Interpretation of results; 7.2 – Model robustness; 7.3 – Identification of Hotspots; 7.4 – Estimation of uncertainty; 7.5 – Conclusions, Recommendations, and Limitations						
					Intermediate verification - LCA methodology	Advanced verification - LCA methodology

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