



NEPCon Carbon Footprint Management Standard

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Type of document:	NEPCon Standard
Scope:	International
Status of document:	Approved
Version:	Version 1.0
Effective date:	03 September 2013
Approval body:	NEPCon
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A. Introduction

The NEPCon Carbon Footprint Management Standard can be applied by organisations seeking to manage their corporate or product carbon footprint in a systematic way. It may be used to evaluate progress towards reducing the organisation's climate impacts and for third-party certification.

The standard is designed to provide a simple, consistent, rigorous and auditable tool for organisations seeking to bring down their carbon footprint and to secure a solid basis for communicating their carbon footprint management efforts.

The uncompromising approach adopted by the standard provides for a high level of credibility. This involves:

- A minimum boundary for carbon footprint calculations;
- An emissions buffer for exclusions;
- Requirements for carbon emission reduction; and
- Clear guidelines for public communication.

The standard is aligned with key requirements of leading corporate and product carbon footprinting standards, integrating ambitious GHG accounting with reduction requirements and offsetting possibilities.

It builds upon core elements of the GHG Protocol standards developed by the World Resource Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), the PAS standards developed by the British Standard Institute (BSI) as well as the climate element of the EU Guidelines for Organisational and Product Environmental Footprinting.

When an organisation's compliance with NEPCon Carbon Footprint Management Standard has been independently verified by NEPCon, they may be issued a NEPCon Carbon Footprint Management Certificate, which can be used to demonstrate compliance with this standard. NEPCon's Logo Usage Guide and the Carbon Communications Requirements listed in Annex VI specify how organisations can use the NEPCon logo and make public claims about their certificate.

Public comment

The standard has been developed through an extensive stakeholder involvement process, including two rounds of public consultation (March to August 2012 and April to June 2013). The standard development is carried out in accordance with the ISEAL Guidelines¹. Comments are also welcome outside the official public consultation period and will be considered during the next revision.

Standard effective date

This standard is effective from 3rd of September 2013. The standard will be reviewed at least every three years. Conformance with the new version will be required immediately for new

¹ ISEAL Code of Good Practice for Setting Social and Environmental Standards, P005 – Version 5.0 – January, 2010

applicants, while existing certificate holders will have a one year period from the date of publication of the new version, to conform to the new requirements.

B. Scope

This standard is applicable to any organisation that would like to reduce their climate impact by developing and implementing a carbon footprint management plan. It targets organisations wishing to reduce their carbon footprint or reach carbon neutrality by a combination of reduced emissions and carbon offsetting.

a. Corporate Carbon Footprint

The scope of the Corporate Carbon Footprint covers the legal entities or relevant holding companies included in the organisational scope.

b. Product Carbon Footprint

The scope of a Product Carbon Footprint covers the full product life cycle, which may be reduced in certain cases as described in this standard.

All aspects of this standard are normative, including the scope, standard effective date, references, terms and definitions, tables and annexes, unless otherwise stated.

The standard indicates clearly when specific requirements are applicable only to *CORPORATE* or *PRODUCT* Footprint respectively. Words included in the glossary (Annex VII) are marked in *italic*.

C. Principles of Carbon Footprint Management

The five accounting principles below shall be adhered to when claiming conformance to this Standard. In case of third party evaluation, compliance with these principles shall be evaluated throughout the standard, where applicable.

- i. **Accuracy** Ensure the carbon footprint appropriately reflects the GHG emissions of the organisation/product and serves the decision-making needs of users – both internal and external to the organisation.
- ii. **Completeness** Account for and report on all GHG emission sources and activities within the chosen boundary. Disclose and justify any specific exclusions.
- iii. **Consistency** Use consistent methodologies to allow for meaningful comparisons of the carbon footprint over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
- iv. **Relevance** Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
- v. **Transparency** Make available the data, methodologies and assumptions used in the carbon footprint calculations and reduction efforts to relevant stakeholders.

Based on GHG Protocol – Corporate standard (2004)

D. References

For further elaboration of concepts or calculation methodology the below listed background standards may be consulted. Comparability between different GHG accounting standards and NEPCon's Carbon Footprint Management Standard is detailed in NEPCon's cross-standard comparison².

- i. WRI/WBCSD: Greenhouse Gas Protocol – GHG Protocol Corporate Accounting and Reporting Standard (2004)
- ii. WRI/WBCSD: Greenhouse Gas Protocol - Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011)
- iii. WRI/WBCSD: Greenhouse Gas Protocol - Product Life Cycle Accounting and Reporting Standard (2011)
- iv. BSI: Public Available Specification 2060 - Specification for the demonstration of carbon neutrality (2010)
- v. BSI: Public Available Specification 2050 - Specification for the assessment of the life cycle greenhouse gas emissions of goods and services (2011)
- vi. The European Commission (2013) - Joint Research Centre: Organisation Environmental Footprint (OEF) Guide.
- vii. The European Commission (2013)– Joint Research Centre: Product Environmental Footprint (PEF) Guide

² Available from NEPCon upon request

1. Quality requirements

1.1. Public Climate Policy statement

- 1.1.1. The Organisation shall have a written, publicly available Climate Policy statement, endorsed at executive level that covers, at minimum, the following aspects:
- a) the reasons for engaging in *carbon footprint management*;
 - b) identification of the subject and the scope of the *carbon footprint*, carbon emissions reductions or *carbon neutrality* (e.g. describe the product or corporation);
 - c) a commitment to reduce the *carbon footprint* and/or achieve *carbon neutrality* for the subject;
 - d) a commitment to conduct periodic quantified reporting on the subject's *carbon footprint* as well as to evaluate performance against emissions reductions and, where applicable, offsetting targets set in a *carbon footprint management plan*;
 - e) a commitment to follow best practices and the principles of accuracy, relevance, completeness, consistency and relevance in all carbon related calculations; and
 - f) a commitment to transparency and to public disclosure of key data in relation to the Organisation's *carbon footprint* as well as the achieved and planned progress towards carbon emissions reduction and *carbon neutrality*, where applicable.
- 1.1.2. The Organisation shall demonstrate that the Climate Policy is implemented and followed.

1.2. Responsibilities and competence

- 1.2.1. The Organisation shall appoint a single person or position with overall responsibility for conformance with all applicable requirements of this standard.
- 1.2.2. The appointed person/position shall have sufficient authority and access to resources to ensure compliance with this standard.
- 1.2.3. All relevant staff shall demonstrate awareness of and competence in the Organisation's procedures relevant to fulfilling this standard.

1.3. Documentation

- 1.3.1. The Organisation shall have documented procedures covering the applicable elements of this standard.
- 1.3.2. The Organisation shall maintain records demonstrating conformance with this standard.
- 1.3.3. All relevant records as per the above indicator shall be retained for a minimum of 5 years.
- 1.3.4. PRODUCT FOOTPRINT ONLY: Organisation shall keep systematic records of all products sold with carbon claims.

1.4. Performance monitoring

- 1.4.1. The Organisation shall define, document and implement a performance monitoring system to conduct periodic assessments of performance against the established carbon emission reduction targets and offset targets where applicable.
- 1.4.2. The Organisation shall define and implement a system for establishing and following up on corrective actions to ensure that reduction and offsetting targets are achieved.

2. Defining the scope of the carbon footprint

2.1. Defining carbon footprint boundaries

- 2.1.1. CORPORATE FOOTPRINT ONLY: The Organisation shall define and justify the *organisational boundaries* of their *carbon footprint* to include all facilities/activities that are financially owned and/or operationally controlled by the organisation.
- 2.1.2. CORPORATE FOOTPRINT ONLY: If a *carbon footprint* is consolidated from several organisational levels or sites, the Organisation shall use the same approach for setting *organisational boundaries* at each level or site.
- 2.1.3. CORPORATE FOOTPRINT ONLY: The Organisation shall identify and list all applicable *direct* and *indirect emissions* from the Organisation's activities both up and down their value chain (see Annex I and Annex II) and include at minimum all Scope 3 emissions listed in the middle column of Annex II.
- 2.1.4. PRODUCT FOOTPRINT ONLY: The Organisation shall define the product, its function and if applicable, the unit of analysis (e.g. tonne of product)
- 2.1.5. PRODUCT FOOTPRINT ONLY: The Organisation shall define and justify all emission generating activities within the product life cycle (either *cradle-to-cradle* or *cradle-to-gate*). Life cycle stages shall include *land-use change*, raw material acquisition and pre-processing, production, distribution and storage, and end-of-life. The Organisation shall illustrate emissions in a process map (see Annex III for a process map example and Annex V for *land-use change* calculation)
- 2.1.6. The Organisation shall define and describe the GHGs applicable for the scope of the *carbon footprint management system*. The Organisation shall, as a minimum, account for the 7 major GHGs: CO₂, CH₄, N₂O, HFCs, PFCs, SF₆ and NF₃. Additional GHGs may be included.
- 2.1.7. Emissions that are anticipated to amount to less than 1% of the total *anticipated carbon footprint* may be left out³.
- 2.1.8. Emissions considered unfeasible to quantify or emissions associated with unreasonably complicated or costly data collection may be left out in justified cases, provided that the total excluded emissions do not account for more than 5% of the total *anticipated carbon footprint*⁴.
- 2.1.9. To compensate for any excluded emission sources in 2.1.8, the Organisation shall allocate an *emission buffer* to the total *carbon footprint* that is proportionate to the anticipated excluded emissions.
- 2.1.10. Any exclusion (including those mentioned in 2.1.7) shall be justified and documented.

2.2. Choosing a base year

- 2.2.1. The Organisation shall choose a base year for which verifiable emissions data are available, and shall specify the reasons for their choice. In justified cases of extreme yearly fluctuations organisation may use an average over multiple years.
- 2.2.2. The base year shall not be set earlier than 24 months from when a decision is taken to engage⁵ in the *carbon footprint management system*.

³ This is also broadly referred to as "materiality threshold", set to ensure that very minor sources of emissions do not require the same treatment as more significant sources.

⁴ Note that the *anticipated carbon footprint* excludes the non-significant sources identified in 2.1.7.

⁵ In case of NEPCon certification this is considered to be the date in which the agreement with NEPCon is signed. If the agreement is signed in 2013, 2011 will be the earliest possible base year.

- 2.2.3. The Organisation may recalculate the *base year carbon footprint* in cases where:
- a) structural changes in the Organisation have a significant impact on its *base year carbon footprint* e.g. transfer of ownership or control of emissions-generating activities or operations from one organisation to another (such as mergers, acquisitions, and divestments or outsourcing and insourcing of emitting activities that already existed in the base year);
 - b) changes in calculation methods or improvements in the accuracy of *emission factors* or activity data that has a significant impact⁶ on the *base year carbon footprint*; or
 - c) the discovery of significant errors⁷, or a number of errors, which are collectively significant.
- 2.2.4. A recalculation of the *base year carbon footprint* shall NOT occur where the organisation experiences *organic growth* or decline, such as the increase or decrease in production output, changes in product mix and closure and openings of operating units that are owned or controlled by the Organisation.
- 2.2.5. The Organisation shall use the *base year carbon footprint* as a reference for tracking emissions and their reductions and, where applicable, offsets, over time.

3. Calculation of carbon footprint

3.1. Identifying emission sources

- 3.1.1. The Organisation shall include in the *carbon footprint* calculations all emissions sources identified in the scope list or process map (Annex II & III).
- 3.1.2. PRODUCT FOOTPRINT ONLY: The Organisation may include *biogenic carbon* stored in final products based on the carbon stored in the product after the 100-year assessment period. Assumptions and calculations of the storage profile shall be documented (see Annex V)⁸.
- 3.1.3. *Avoided emissions* (e.g. from recycling) and emissions of *biogenic carbon* (e.g. biomass) shall not be included but may be reported separately.

3.2. Choosing calculation methods

- 3.2.1. The Organisation shall justify and document the chosen method for calculating the *carbon footprint* (e.g. sector specific calculation tools, spread sheets etc.).
- 3.2.2. Companies shall use the most accurate *calculation method* available to them.
- 3.2.3. In case updated *sector* or *product specific category rules* exist these shall be applied⁹.
- 3.2.4. *Carbon footprint* calculations shall be made exclusive of any purchases of *carbon offsets*.

⁶ The impact is considered significant when it results in a minimum of 10% over- or underestimation of the base year carbon footprint

⁷ An error is considered significant when it results in a 10% over- or underestimation of the base year carbon footprint.

⁸ While forest management activities may result in additional carbon sequestration in forest biomass, this potential source of storage is not included in this standard.

⁹ e.g. ISO 16759 Quantifying and communicating the carbon footprint of print media products

3.3. Collect emission data and choose emission factors

- 3.3.1. The *carbon footprint* shall be based on *primary data* for all processes owned or operated by the organisation. For any other process organisation shall use primary data if available and otherwise use *secondary data* from a relevant and authoritative source.
- 3.3.2. The Organisation shall identify and document the method for collecting emission data across the Organisation or the product life cycle.
- 3.3.3. CORPORATE FOOTPRINT ONLY: The *Carbon footprint* shall be expressed in emission *intensity terms* as an amount of *kgCO₂e* or *tCO₂e* per intensity unit (e.g. per staff member).
- 3.3.4. CORPORATE FOOTPRINT ONLY: The organisation shall use the most appropriate intensity unit to indicate *intensity terms emissions* and reductions in order to communicate transparently about their carbon footprint (for production organisations this would normally be a production unit; for service organisations this could be for example staff).
- 3.3.5. PRODUCT FOOTPRINT ONLY: The *carbon footprint* shall be expressed in relation to the specified unit of analysis in *kgCO₂e* or in *tCO₂e* (e.g. *kgCO₂e* per single production unit or per 1 m³ of product).
- 3.3.6. Where quantifications are based on calculations (e.g. GHG data is multiplied by an *emission factor*) GHG emissions shall be calculated using *emission factors* from updated and reliable source i.e. government publications or international or industry guidelines.
- 3.3.7. Whenever possibly, the Organisation shall use *emission factors* that are relevant to the activity concerned and current at the time of quantification (e.g. *kgCO₂e* per kWh for the year under calculation).
- 3.3.8. The Organisation shall identify and document all sources of used data and *emissions factors*.
- 3.3.9. The Organisation shall ensure that the emissions reduction resulting from the organisations use of renewable energy (calculated with a zero emission factor) is not double counted – e.g. included in the national energy mix or national emissions reduction efforts.

3.4. Allocations¹⁰

- 3.4.1. The Organisation shall avoid or minimise *allocations* where possible. This is done by either subdividing the process and collecting data, or expanding the system boundaries to include the full process.
- 3.4.2. If allocations cannot be avoided they shall be based on a physical relationship (mass, energy) or as a second priority on an economic relationship.
- 3.4.3. The Organisation shall identify and document *allocation* methods.
- 3.4.4. PRODUCT FOOTPRINT ONLY: Benefits (in the form of reduced emissions) of using recycled material can either be allocated to the acquisition of the recycled material or to recycling of this material, not both.
- 3.4.5. PRODUCT FOOTPRINT ONLY: For allocations of recycled input or recyclable output organisations shall use either the 100-0 (All process emissions of recycling stay within the organisations production chain) or 0-100 method (calculation of a virgin material displacement factor that reduced the total carbon footprint), or apply an emission factor calculated based on one of these methods.

¹⁰ Allocations is the process of dividing emissions from a single facility, process or system among its various outputs e.g. in several product outputs. See glossary for further elaboration.

3.5. Assessing data quality and uncertainty

- 3.5.1. The Organisation shall assess the quality of the data collected and hence the uncertainty of the *carbon footprint* calculation related to:
- a) calculation methods including *emission factors* used;
 - b) estimates and assumptions;
 - c) allocation methods; and
 - d) product use and end-of-life profile.
- 3.5.2. The Organisation shall produce an assessment of the data quality based on the completeness, time representativeness, technological representativeness, geographical representativeness. The assessment should provide a quantitative evaluation when possible.

4. Carbon footprint management plan

4.1. Commitment to carbon emissions reduction and/or carbon neutrality

- 4.1.1. The Organisation shall set targets for emission reduction based on the *base year carbon footprint*.
- 4.1.2. The Organisation shall follow national or industry based best practise for setting reduction targets¹¹ and justify choices in their *carbon footprint management plan*.
- 4.1.3. The Organisation shall define a written action plan for achieving emission reduction based on the *base year carbon footprint* and the targets established.
- 4.1.4. In the *carbon footprint management plan* the organisation shall demonstrate a genuine effort to prioritise reduction over offsetting to the extent feasible.
- 4.1.5. The Organisation shall make a plan for improving data quality of the *Carbon footprint* calculations over time.
- 4.1.6. If the Organisation wishes to offset part of its emissions, it shall set targets and define a written action plan for emissions offsets based on the *base year carbon footprint*.
- 4.1.7. If the Organisation wishes to reach *carbon neutrality*, it shall set a timeframe for achieving this.
- 4.1.8. The Organisation shall implement the planned reductions and offsetting described in its *carbon footprint management plan*.
- 4.1.9. The *carbon footprint management plan* shall be updated at least every 12 months to reflect any changes in the planned reductions, and offsetting if applicable.

4.2. Carbon emission reduction

- 4.2.1. The Organisation shall conform to all applicable national and/or international emission reduction regulations.
- 4.2.2. The methods used by the Organisation to demonstrate reductions shall meet the following principles:
- a) the methods shall document the amounts and type of GHG emissions that have been reduced and the time period involved (expressed in *tCO₂e*);
 - b) the methods shall be the same as that used to calculate the base year carbon emissions (for potential base year recalculations, see 2.2.2. b);

¹¹ Please notice that Annex VI sets minimum thresholds that shall be achieved, before usage of any NEPCon claims is allowed.

- c) emission reduction shall be expressed in *intensity terms emissions* (e.g. per number of staff or production unit) and shall relate to the selected *base year*.
- d) reductions made outside of the defined scope shall not be included;
- e) where specific national or industry mandatory reduction targets apply, the Organisation shall ensure, at minimum, that these are fulfilled. Any claims of carbon emission reduction shall reflect these mandatory demands; and
- f) the organisation shall justify that the claimed emission reduction are additional to and independent of any general or sector specific financial downturn¹².

4.3. Carbon emissions offsetting

- 4.3.1. The Organisation shall purchase and retire the amount of *carbon offsets* (credits) equivalent to the non-reduced emissions.
- 4.3.2. The Organisation shall identify and document the standard (e.g. Gold standard, VCS etc.) used to generate the purchased *carbon offsets*.
- 4.3.3. The Organisation shall ensure that purchased and retired *carbon offsets* meet the criteria listed in Annex IV to this standard.

5. Reporting and public information

5.1. General information

- 5.1.1. The Organisation shall make the name and contact information of the position responsible for its *carbon footprint* management publicly available.
- 5.1.2. The Organisation shall ensure that the information about its progress towards carbon emission reduction and *carbon neutrality* if applicable is presented publicly in a way that enables the progress to be tracked over time (e.g. info-graphics on webpage).

5.2. Scope

- 5.2.1. The Organisation shall make the following information publicly available in writing:
 - a) the scope of the *carbon footprint*
 - b) a list of and justification for any excluded emissions;
 - c) the base year, as well as a justification for the chosen base year and the basis for any base year recalculations, if applicable;
 - d) the method used to calculate *land-use change impacts*, where applicable;
 - e) the GHGs considered included within the *carbon footprint*;
 - f) CORPORATE FOOTPRINT ONLY: the *organisational boundaries* chosen and the approach applied (financial or operational approach);
 - g) CORPORATE FOOTPRINT ONLY: a list of included emissions specified in Scope 1, 2 & 3;
 - h) PRODUCT FOOTPRINT ONLY: the emissions-generating activities within each product life cycle stage; and
 - i) PRODUCT FOOTPRINT ONLY: the product life cycle-stage definition and description, a process map and justification of a *cradle-to-gate* boundary, when chosen.

¹² Notice that the purpose of point 4.2.2 b, is to enable comparable figures across time, regardless of general business growth or decline. Even though the standard requires *intensity terms emission*, this may have an impact. The organisation shall make a genuine effort to reflect the effects of real emission reduction in its calculation results and not reductions due to a decline of production volumes resulting from, for example, an overall decline in business.

5.3. Calculation methods

5.3.1. The Organisation shall make the following information publicly available in writing:

- a) all assumptions made in quantifying GHG emissions and the selection or development of *emission factors*;
- b) the source of the *Global Warming Potential* (GWP) factors used;
- c) the calculation methods used to quantify the *carbon footprint* (e.g. use of *primary* or *secondary data*), the measurement unit(s) applied, the period of application and the size of the resulting *carbon footprint*. A reference or link shall be provided for any calculation tools used and emissions factors applied; and
- d) the methods used to avoid or perform *allocations*.

5.4. Carbon footprint results

5.4.1. The Organisation shall make the following information publicly available in writing:

- a) The total size of the *corporate* or *product carbon footprint*.
- b) CORPORATE FOOTPRINT ONLY: emissions from sources in Scope 1, 2 and 3
- c) PRODUCT FOOTPRINT ONLY: the percentage of total *carbon footprint* by life cycle-stage
- d) PRODUCT FOOTPRINT ONLY: The amount of carbon contained in the product or its components that is not released to the atmosphere within the 100-year assessment period.
- e) PRODUCT FOOTPRINT ONLY: For *cradle-to-gate* inventories, the amount of carbon contained in the intermediate product.

5.5. Progress towards carbon emissions reduction and carbon neutrality

5.5.1. The Organisation shall make the following information publicly available in writing and shall update the information at least yearly (information about previous periods shall remain publicly available for comparison):

- a) means of achieving GHG emission reduction, including a list of actions taken;
- b) actual emission reduction that has been achieved, in *intensity terms* (e.g. per number of staff or production unit);
- c) the time period chosen to measure reduced emissions;
- d) the size of the reduced *carbon footprint*, expressed in *intensity terms*;
- e) balance of non-reducible emissions and retired *carbon offsets*; and
- f) confirmation that purchased or retired carbon offsets meet the criteria stated in 4.3.4.

6. Claims

6.1. General terms for making carbon footprint, carbon emission reduction and carbon neutrality claims

6.1.1. Any claims shall be approved by a senior representative of the Organisation and information about the time of approval shall be available.

6.1.2. Claims shall:

- a) clearly identify the *subject* and scope of the declaration;
- b) clearly identify the organisation responsible for making the declaration;
- c) include the size of the *base year carbon footprint* and any reduction achieved;
- d) include the *qualification date*.

- 6.1.3. Claims of carbon emission reduction and *carbon neutrality* may only be made once the Organisation can prove it has reduced and achieved *carbon neutrality* in accordance with this standard.
- 6.1.4. The Organisation shall not be eligible to make a declaration about *carbon neutrality* based on offsetting alone.
- 6.1.5. Claims shall be approved by NEPCon prior to its use and evidence of approval shall be maintained as records.
- 6.1.6. For any NEPCon-related public claims or labels the organisation shall follow the requirements presented in NEPCon's logo usage guide and NEPCon's Carbon Communications Guidelines (Annex VI).

6.2. Measured carbon footprint

After calculating the footprint and prior to reducing its carbon emissions, the Organisation may use the following declaration: CORPORATE FOOTPRINT: "[Organisation name] has measured our corporate carbon footprint of to be [xx] tCO₂e per [intensity unit] during year [year]. The carbon footprint is verified by [certification body], [month, 20XX]."

PRODUCT FOOTPRINT: "[Organisation name] has measured the carbon footprint of this product to be [xx] kgCO₂e during year [year]. The carbon footprint is verified by [certification body], [month, 20XX]."

6.3. Achievement of carbon emission reduction

- 6.3.1. After reducing its carbon emissions, the Organisation may use the following declaration: CORPORATE FOOTPRINT: "[Organisation name] has reduced our corporate carbon footprint by [xx%] compared to the [base year] carbon footprint of [xx] tCO₂e per [intensity unit]. Verified by [certification body], [month, 20XX]."

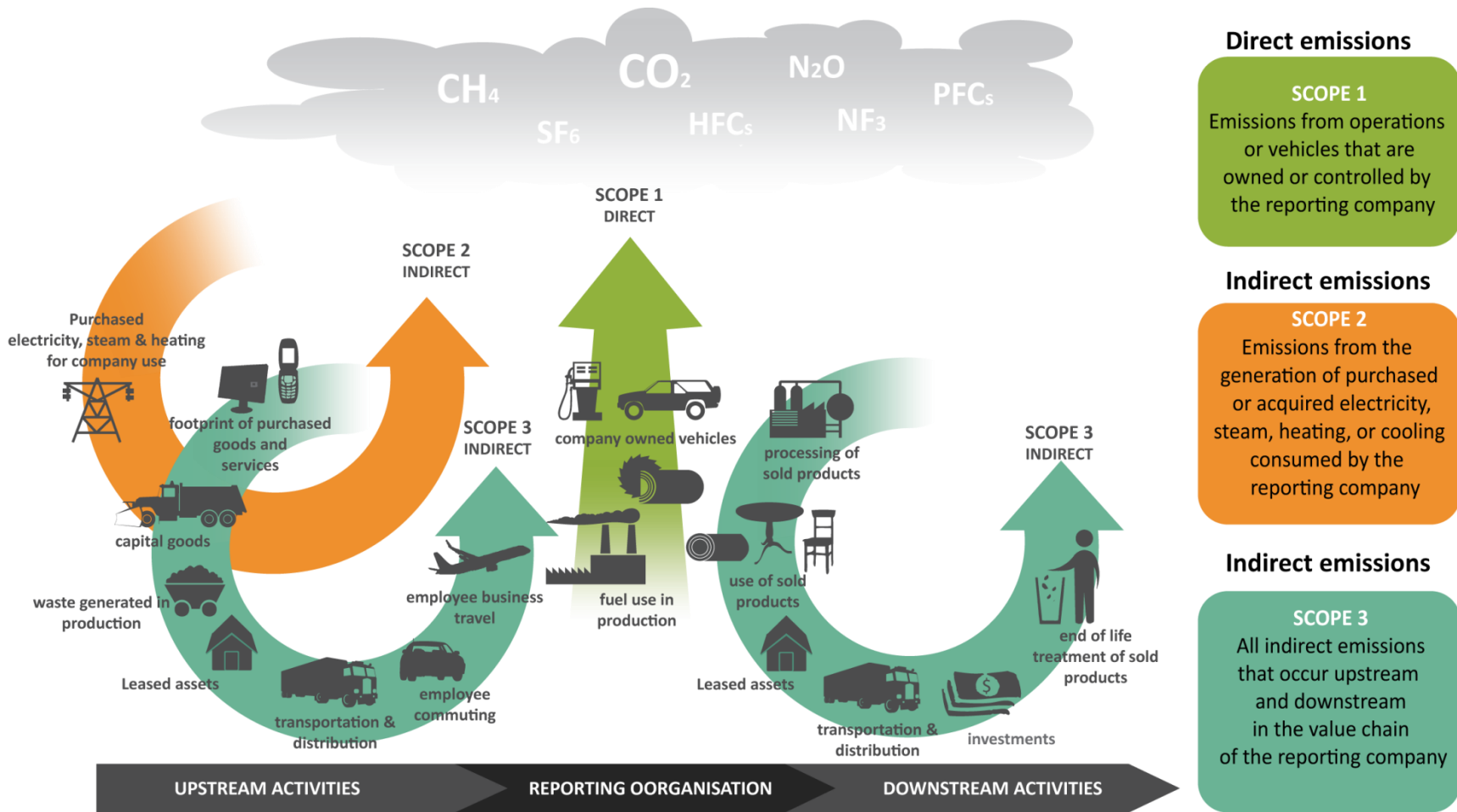
PRODUCT FOOTPRINT: "[Organisation name] has reduced the carbon footprint of this product by [xx%] compared to the [base year] carbon footprint of [xx] kgCO₂e. Verified by [certification body], [month, 20XX]."

6.4. Achievement of carbon neutrality

- 6.4.1. After reaching *carbon neutrality*, the Organisation may use the following declaration: CORPORATE FOOTPRINT: "[Organisation name] has achieved carbon neutrality in [year] by reducing our emissions by [xx%] and offsetting all remaining emissions, compared to the [base year] carbon footprint of [xx] tCO₂e per [intensity unit]. Carbon offsets is verified by a third party, using [xx] standard. Verified by [certification body], [month, 20XX]."

PRODUCT FOOTPRINT: "This product can be considered carbon neutral as we have offset all life cycle carbon emissions. The product carbon footprint has been reduced by [xx%] from [cradle to gate/to grave], compared to the [base year] carbon footprint of [xx] kgCO₂e. Carbon offsets is verified by a third party, using [xx] standard. Verified by [certification body], [month, 20XX]."

Annex I: Corporate footprint - emission scopes



Direct emissions

SCOPE 1

Emissions from operations or vehicles that are owned or controlled by the reporting company

Indirect emissions

SCOPE 2

Emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company

Indirect emissions

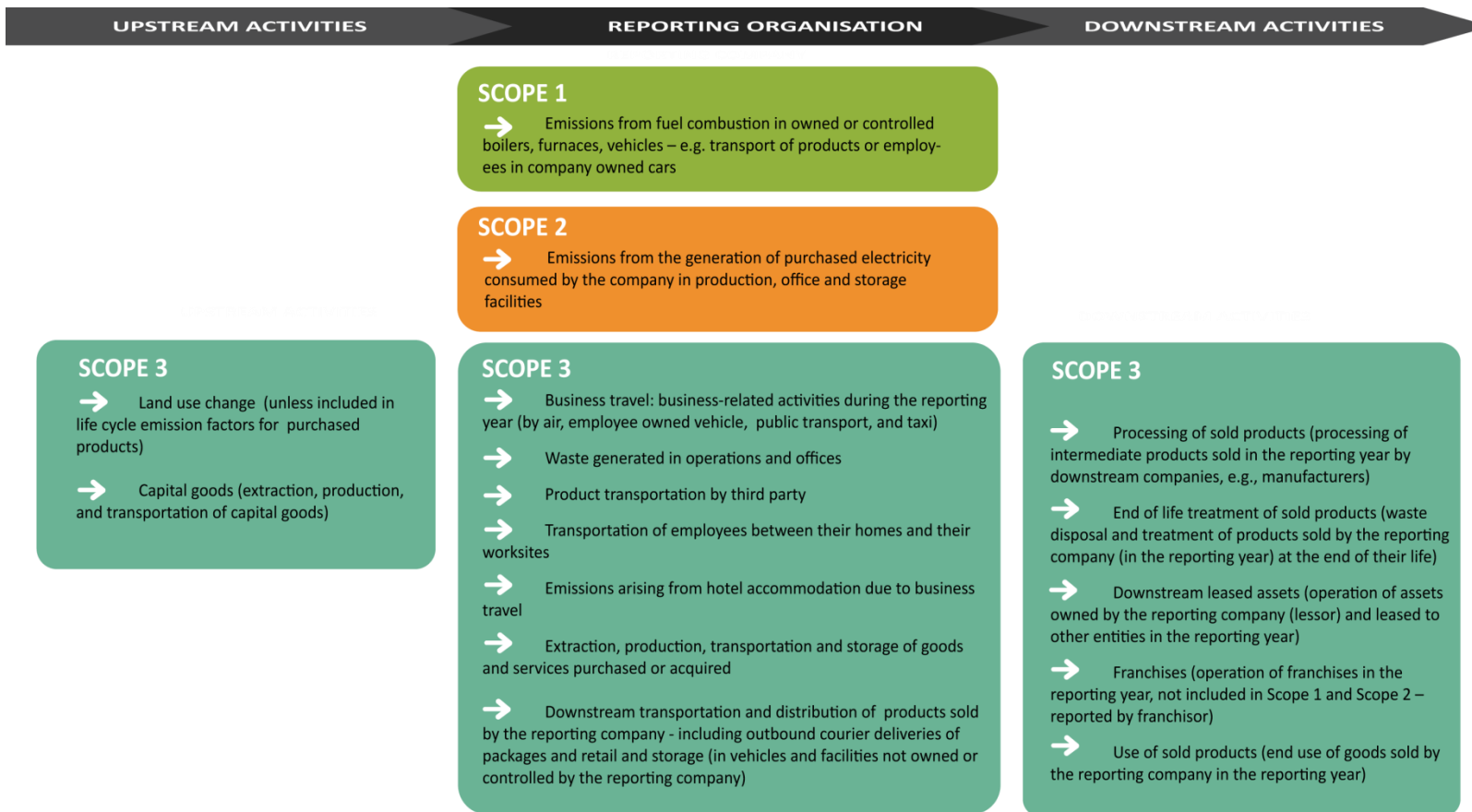
SCOPE 3

All indirect emissions that occur upstream and downstream in the value chain of the reporting company

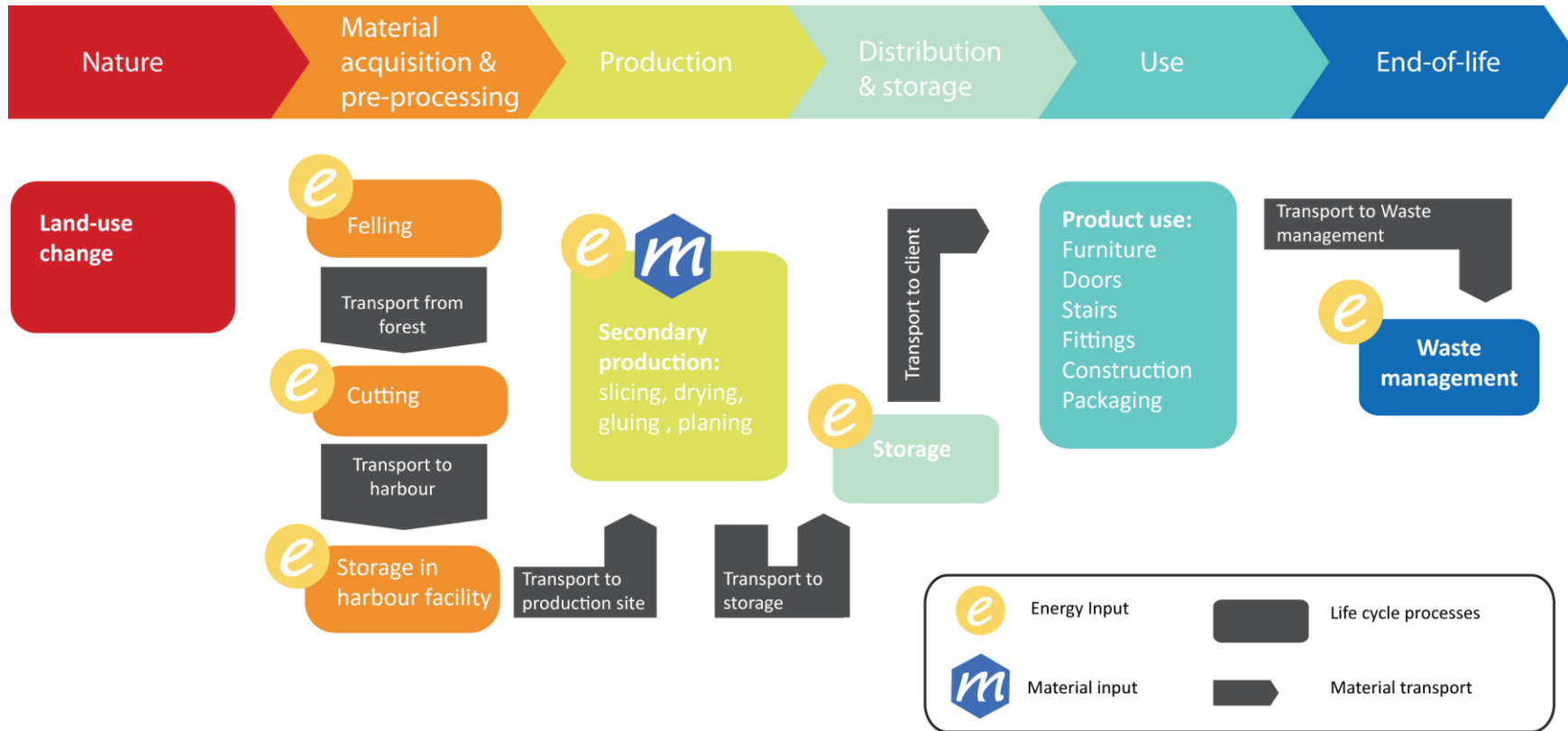
Source: Based on GHG Protocol – Scope 3 Standard

Annex II: Corporate Carbon footprint – Scope specification

Organisations striving to meet best practices should aim to measure ALL applicable scope 3 emissions – up and down their value chain, however scope 3 emissions described in the middle column below, are considered to be the most relevant and *significant indirect emissions*. Hence, to fulfil the NEPCon CFM standard, organisations shall at minimum include all the scope 3 emissions listed in the middle column below.



Annex III: Product footprint - Process map example



Source: GHG Protocol - Product Standard

Annex IV: Offsetting emissions

1. Definition

By offsetting, organisations compensate their non-reducible carbon emissions by purchasing and retiring carbon credits that represent additional reductions in carbon emissions taking place outside of the Organisation itself, e.g. in a forest reforestation project. A credit should not be considered an offset until it is *retired*.

2. Principles for offsetting

For the purchase and *retirement* of carbon credits the following principles apply:

Carbon credits shall:

- a) represent genuine, additional GHG emission reduction;
- b) represent additional, unique and permanent reductions;
- c) be verified by an independent third party verifier;
- d) originate from forest carbon projects to the widest extent possible;
- e) be *retired* within 12 months from the date of purchase;
- f) be supported by publically available project documentation (including quantification methodology and validation and verification procedures); and
- g) be stored and *retired* in an independent and credible registry.

Carbon credits deriving from forest carbon and land use projects are recommended and organisations should provide justification when choosing other credits.

3. Credible verification schemes

During publication of this standard, NEPCon identified the following verification schemes as fulfilling the above principles¹³. The list may not be conclusive and other schemes may be eligible as long as they comply with the principles in section 2 above.

- Gold Standard (incl. CarbonFix)
- Voluntary Carbon Standard
- Plan Vivo Standard

¹³ You may contact NEPCon for the latest list of credible schemes, since this may change in time with more frequency than the standard is revised.

Annex V: Land-use change and carbon storage in products

1. Land-use change

Land-use change attribution is defined by the emissions resulting from any change in land use associated with an organisation's activities or the production of a product; such as the change from forest to agricultural land.

1.1. Including emissions from land-use change

Land-use change is to be included in all *product carbon footprints*, but is not included in the minimum requirements for *corporate carbon footprints* (see Annex II). Organisations that do estimate high emissions resulting from change in land-use due to their business activities are however recommended to include *land-use change impact* in their *corporate carbon footprint*. Land-use conversion might represent an important area for carbon emission reduction, e.g. by changing from uncertified to certified timber, where land use change is not expected¹⁴.

1.2. Methods for calculating land-use change

The basic principle for calculating the carbon emissions resulting from land use change is to assess the change in *carbon stock* between the previous and the new land use over a 20 year period or a harvest cycle (whichever is longer). When the location of origin of the purchased raw material is known, organisations can calculate the change in *carbon stock* based on satellite imagery, historical data, sector or country specific data/*emission factors* or generic data/emission (e.g. IPCC¹⁵, FAOSTAT¹⁶). If the location (region or country) of origin or the previous land-use is not known, organisation must estimate the most likely scenario and choose a conservative approach.

Please find more guidance in the Greenhouse Gas Protocol Product Standard – Appendix B.

2. Carbon storage in products

Carbon stored in products is relevant for *product carbon footprints* only and is defined by the accumulation of carbon in a form other than an atmospheric gas e.g. carbon stored in wood products. *Carbon storage* should be calculated based on the expected use profile of the product over a *100-year assessment period* – i.e. how much carbon is expected to remain in the product after 100 years. Assumptions and calculations of the storage profile shall be documented. Organisations are advised to procure recognized default values for carbon stored in products, e.g. Winjum et al. (1998)¹⁷ or the IPCC¹⁸. While forest management activities may result in additional carbon sequestration in forest biomass, this potential source of storage is not included in this version of the standard, but will be evaluated in forthcoming revisions.

¹⁴ NEPCon deems FSC™ certification to offer assurance for responsible forest management. Other standards shall be considered by NEPCon on a case by case basis.

¹⁵ IPCC, 2006 IPCC Guidelines for National GHG Inventories, vol. 4: Agriculture, Forestry, and Other Land Use.

¹⁶ FAO, FAOSTAT. Available from <http://faostat.fao.org>, 2011.

¹⁷ Winjum, J.K., Brown, S. and Schlamadinger, B. (1998): Forest harvests and wood products: sources and sinks of atmospheric carbon dioxide. *Forest Science* 44: 272-284 31

¹⁸ IPCC, 2006 IPCC Guidelines for National GHG Inventories, vol. 4: Agriculture, Forestry, and Other Land Use.

Annex VI: NEPCon's Carbon Communications Requirements

1. Pre-approved statements

Organisations that have been third-party certified by NEPCon may choose to use any of the following general statements to communicate their *carbon footprint management* efforts.

- a) We are committed to systematically reducing our carbon footprint year by year, lessening our impact on the world's climate.
- b) We are committed to systematically reducing our carbon footprint year by year and are certified as meeting the comprehensive requirements of the NEPCon Carbon Footprint Management Standard.
- c) We recognise the need to offer more climate friendly [products/services] and believe this will support our business to grow and strengthen in the long-term. We are committed to systematically reducing our carbon footprint year on year and are certified as meeting the comprehensive requirements of the NEPCon Carbon Footprint Management Standard.
- d) We are committed to lessening our impact on the world's climate by systematically reducing carbon emissions in our value chains. Certified under the NEPCon's Carbon Footprint Management Standard, we are able to communicate our carbon footprint with confidence, offering a transparent way for our customers to track our progress.
- e) Meeting the comprehensive requirements of the NEPCon Carbon Footprint Management Standard enables us to communicate our carbon footprint with confidence and offers a transparent way for our customers to track our progress. We are committed to systematically reducing our carbon footprint year by year, enabling us to pass the efficiency benefits that we gain on to our customers.
- f) Certification according to the NEPCon Carbon Footprint Management Standard demonstrates our commitment to reducing our carbon footprint year on year, lessening our impact on the world's climate.
- g) We are committed to systematically reduce and monitor our carbon footprint and are meeting NEPCon's comprehensive standard for carbon footprint management. By identifying areas in our value chain that have the greatest climate impact, we are able to achieve the highest potential for reduction.
- h) Certified as meeting the NEPCon Carbon Footprint Management Standard demonstrates that we are working systematically to reduce our carbon footprint year by year, enabling us to pass on the efficiency gains that we make on to our customers.

2. Three levels of labels

Organisations fulfilling the requirements of this standard may apply off and on-product labels according to three levels below:

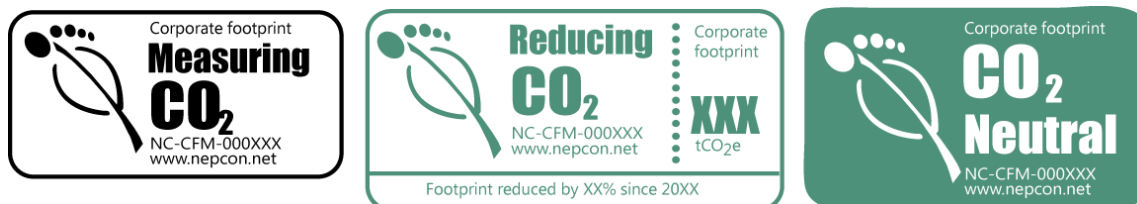
- a) Measuring CO₂: After organisation has completed calculation of the *carbon footprint* and this has been verified by NEPCon to meet the requirements of this standard.
- b) Reducing CO₂: After organisation has achieved reduction of emissions according to its *carbon footprint management plan*, meeting the minimum thresholds described in this annex and this has been assessed by NEPCon.

- c) **CO₂ neutral**: After organisation has met its reduction targets according to the *carbon footprint management plan* meeting the minimum thresholds described in this annex and has offset all the remaining non-reducible emissions according to the requirements in this standard and this has been assessed by NEPCon.

3. Principles for off-product label use

NEPCon off-product CFM labels can be used provided the following principles are followed:

- Off-product labels may be applied for promotional use, such as websites, letterheads, catalogues, email signatures, annual reports, CSR reports etc.
- Off-product labels shall be accompanied by a claim according to Section 6 of this standard.
- Off-product labels communicating carbon emission reduction or carbon neutrality shall only be used after organisation has demonstrated a minimum of 5% reduction compared to the base year carbon footprint.
- Off-product labels communicating carbon emission reduction or carbon neutrality shall only be used continuously as long as companies can demonstrate year by year carbon emission reduction compared to the base year carbon footprint.



4. Principles for on-product label use

NEPCon on-product CFM labels can be used provided the following principles are followed:

- On-product labels may be placed on products that fulfil the requirements of this standard.
- On-product labels communicating carbon emission reduction or carbon neutrality shall only be used after organisation has demonstrated a minimum of 5% reduction compared to the product's base year carbon footprint
- On-product labels communicating carbon emission reduction or carbon neutrality shall only be used continuously as long as companies can demonstrate year by year carbon emission reduction compared to the base year carbon footprint



NOTE 1: All labels are available in the following three colours: black; NEPCon green and white on NEPCon green. Labels shall be large enough that all of the text is legible.

NOTE 2: NEPCon reserves the right to reject the use of these labels if the calculated carbon footprint of the organisation is proven to be below any known industry average.

Annex VII: Glossary

100-year assessment period	PRODUCT FOOTPRINT: the time period for which the GHG emissions and removals from the product life cycle shall be accounted for.
Allocations	The process of dividing GHG emissions from a single facility or system (e.g. vehicle, business unit, corporation) among its various outputs or between various products. <i>Allocations</i> are used in both product and corporate carbon footprints where emissions data is not readily available for the individual product or organisation but must be shared between several. For example one transportation route can be shared between a numbers of products transported by several organisations, or an emission generating production process can be share between several products (e.g. sawn logs and sawdust). Methods for <i>allocations</i> can be further explored in GHG Protocol – Scope 3 Standard (Chapter 8).
Anticipated carbon footprint	Refers to a rough estimate, anticipated not to be at the same level of accuracy with the rest of the calculations.
Application period	The time period for which the first or any suggestive carbon footprints is calculated (e.g. the base year) and for which the organisation is applying for certification.
Avoided emissions	Avoided emissions (typically used in product carbon footprints) are emission reduction that are indirectly caused by the studied product or a process that occurs in the studied product's life cycle. In the case of renewable energy (e.g. biomass) avoided emissions can be calculated by assuming that the use of the biomass reduces the demand for coal-fired power. Some standards allow avoided emissions to be subtracted from the total inventory results.
Base year carbon footprint	Greenhouse gas emissions of the organisation (corporate footprint) or from the product life cycle (product footprint) measured in the determined base year. The base year carbon footprint is used as a reference for any emission reduction and offsets.
Biogenic carbon	Carbon produced by living organisms or biological processes, but not fossilised or from fossil sources (e.g. wood)
Calculation method	The technical method used by the organisation to calculate the carbon footprint. E.g. using GHG protocol spread sheets, own produced spread sheets or online tools.
Carbon credit	The 'currency' for offsetting. See <i>Carbon offset</i>
Carbon dioxide (CO₂)	A naturally occurring gas and one of the most abundant greenhouse gases in the atmosphere. Carbon dioxide is also a by-product of industrial processes, burning fossil fuels and land use changes.
Carbon dioxide equivalent (CO₂e)	The universal unit of measurement used to indicate the global warming potential of greenhouse gases expressed in the terms of the 100 year global warming potential of one metric tonne of carbon dioxide (tCO ₂ e). Product carbon footprints are usually expressed in kilograms or tons of CO ₂ e.
Carbon footprint	The total set of greenhouse gas (GHG) emissions caused by an organisation, event or product. For simplicity of reporting and comparison, it is often expressed in terms of the amount of carbon dioxide equivalent.
Carbon footprint management	The activity of monitoring, reducing, offsetting and reporting on a corporate or product carbon footprint.
Carbon footprint management plan	Organisation's plan for monitoring, reducing and offsetting carbon emissions from either a corporate or a product footprint. The plan can consist of various data

	sources and documents and does not necessarily need to be a single document.
Carbon footprint management system	A broad term covering organisation's full system for managing it's carbon footprint.
Carbon neutral	Condition in which there is no net increase in the global emission of greenhouse gases to the atmosphere as a result of the greenhouse gas emissions associated with the subject.
Carbon offset	Offsets are purchased as credits and when retired can be used to offset emissions on a voluntary basis. They are quantified in credits of metric tonnes or kilograms of CO ₂ e reductions, i.e. one carbon offset equals one tonne of emissions reduction made through selected and verified carbon projects.
Carbon stock	The total amount of carbon stored on a plot of land at any given time in one or more of the following carbon pools: biomass (above and below ground), dead organic matter (dead wood and litter), and soil organic matter. A change in carbon stock can refer to additional carbon storage within a pool, the removal of CO ₂ from the atmosphere, or the emission of CO ₂ to the atmosphere.
Carbon storage	Retention of carbon from biogenic or fossil sources or of atmospheric origin in a form other than as an atmospheric (e.g. wood products).
Cradle-to-gate	Life cycle stages from the extraction or acquisition of raw materials to the point at which the product leaves the Organisation undertaking the assessment.
Cradle-to-grave	Life cycle stages from the extraction or acquisition of raw materials to recycling and disposal of waste.
Direct emissions	Emissions from sources that are owned or controlled by the reporting organisation.
Double counting	When two or more individuals or organisations claim ownership of specific emission reduction or carbon offsets.
Downstream emissions	Emissions occurring downstream in the value chain, after the handover of products or waste to a 3rd party e.g. emissions caused by waste handling and recycling activities of the organisation's products.
Emission buffer	An emission buffer refers to a percentage with which the total carbon footprint is multiplied in order to compensate for excluded emissions.
Emission factor	An amount of greenhouse gases emitted, expressed as carbon dioxide equivalent and relative to a unit of activity (e.g. kgCO ₂ e emitted in relation to a kWh of electricity purchased).
Emission scopes	The release of greenhouse gases into the atmosphere divided into direct (scope 1) and indirect emissions (scope 2 and 3).
GHG accounting	The activity of accounting for an organisation's greenhouse gas emissions.
Global Warming Potential (GWP)	A measure of how much a given amount of greenhouse gas is estimated to contribute to global warming, relative to the same amount of carbon dioxide. See CO ₂ e.
Greenhouse Gases (GHGs)	The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO ₂), methane (CH ₄) and nitrous oxide (N ₂ O). Less prevalent – but very powerful – greenhouse gases are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF ₆), and the recently added by the UNFCCC nitrogen trifluoride (NF ₃).
Indirect emissions	Emissions from sources that are owned or controlled by a third party but whose emissions are influenced by the reporting organisation.

Intensity terms emission	An expression of the carbon footprint per unit of physical activity or unit of economic value, e.g. tCO ₂ e per staff member employed or per ton of product produced within the base year. Also known as <i>intensity ratio</i> (GHG P, 2004).
Intensity target	A reduction target relative to the intensity unit. E.g. 15% reduction of emissions per staff member between 2012 and 2015.
Land-use change impact	A change in the purpose for which land is used by humans (e.g. between crop land, grass land, forest land, wetland, industrial land).
Land-use change attributions	The change in carbon emissions resulting from a land-use-change attributed to a corporate or product footprint. The land-use-change attribution is calculated by determining or estimating the carbon storage potential of the previous land use and subtracting the carbon storage potential of the new land use.
Method	Methods used to calculate the carbon emissions from activities taking place within the organisation and up – and downstream in the value chain.
Organic growth	Refers to the growth or decline of the Organisation’s business operations, e.g. increase or decreasing production volumes.
Organisational boundaries	The boundaries that determine the activities owned or controlled by the reporting organisation, depending on the consolidation approach taken (<i>financial</i> or <i>operational control approach</i>).
Primary data	Process-specific data obtained by direct measurement of the energy or business activities.
Product Carbon Footprint	The calculated emissions from all life cycle stages of a given unit of product or well-defined service product in its time of function.
Qualification date	The date at which the proclaimed carbon emission reduction or carbon neutrality has been achieved and the organisations hence qualify for the claims.
Retirement (of carbon credits)	To permanently remove carbon offsets from market to ensure that they are not re-sold. Offsets are usually retired by giving them individual serial numbers and placing them in an official registry.
Subject	Refers to the entity under investigation and the subject of the carbon neutral claim, e.g. the specified corporation or product.
Secondary data	Non-process specific data obtained from sources other than direct measurement of the energy or business activities.
Sector/product specific category rules	Rule set developed for a specific sector or product group, stating the most significant carbon emissions sources in the corporate footprint or the product lifecycle. Such rules shall enable consistent application of footprinting methodology within a sector and ensure meaningful comparison between companies and products.
Supporting documentation	The documents in which the organisation demonstrate conformance with this standard, e.g. the Climate Policy statement and carbon footprint management plan.
Up-stream Emissions	Emissions occurring upstream in the value chain, before takeover of the material by the reporting organisation. Upstream emissions are generally caused by a 3rd party and can therefore be difficult to obtain, determine or quantify.
Waste	Waste material arising from the production or use phase and sent to waste management - waste from the production that is reused for a different process is therefore not considered as waste.

A unique perspective



About NEPCon

NEPCon is an international, non-profit organisation that works to ensure responsible use of natural resources and secure sustainable livelihoods worldwide. We aim to transform land-use, business practice and consumer behaviour through the delivery of credible certification services as well as our involvement in innovative projects.

By engaging with companies, organisations and governments, we empower people to be part of the solution in tackling some of the greatest environmental threats facing mankind - including climate change and biodiversity loss. All of our services enable our customers to communicate their commitments to their clients and the public.

FSC[®], SmartLogging, carbon footprint certification, carbon forest verification and timber legality verification services are provided in collaboration with the Rainforest Alliance.

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