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Carbon footprint for seafood — Product category rules (CFP–PCR) for finfish

Empreinte carbone des fruits de mer — Règles de définition des catégories de produit (CFP–PCR) pour les poissons

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 234, *Fisheries and aquaculture*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document contains product category rules for the calculation and communication of the carbon footprint of finfish products. The CFP–PCR (carbon footprint of products – product category rules) is as defined in ISO 14067:2018.

This document sets out rules for the calculation and communication of the carbon footprint of finfish products. The overarching aim of the document is to provide a basis for reliable and accurate information about the climate impact of the product. It is a pre-condition for a market-driven reduction of climate impact of finfish products that dealers and consumers are able to choose the products with the least climate impact. In addition to this, the document will provide:

— a basis for the development of tools and databases for calculating the carbon footprint of finfish products;

— a basis for internal improvement efforts in the finfish industry;

— an improved knowledge base concerning the value chains of finfish products, their resource consumption and climate impacts;

— a basis for further understanding the environmental impact of finfish products beyond climate change alone.

This document is intended to function in line with ordinary market mechanisms. Providing credible and transparent information about the products' climate impact will pave the way for increased demand and market value of the most climate-friendly finfish products. It will also provide incentives to drive further improvements and reduce energy consumption and climate impacts from all links in finfish value chains.

Carbon footprint for seafood — Product category rules (CFP–PCR) for finfish

1 Scope

This document specifies requirements for calculating the carbon footprint specific to finfish product category rules (CFP–PCR). This methodology builds on the requirements of International Standards for life cycle assessment (LCA) and products' carbon footprints.

This document is applicable to the calculation and communication of finfish products' carbon footprints from fishing and/or cultivation of feed ingredients to the consumption of finfish products. It is applicable to the carbon footprints of products from both fisheries and aquaculture value chains.

This document used alone does not apply to specifying a product's overall environmental or sustainability characteristics.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14026:2017, *Environmental labels and declarations — Principles, requirements and guidelines for communication of footprint information*

ISO 14040, *Environmental management — Life cycle assessment — Principles and framework*

ISO 14044, *Environmental management — Life cycle assessment — Requirements and guidelines*

ISO 14067:2018, *Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification*

IPCC. *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC).* Cambridge University Press, Cambridge, UK and New York, NY, USA, 2013

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1 Quantification of the carbon footprint of a product

3.1.1
carbon footprint of a product
CFP
sum of *greenhouse gas (GHG)* (3.4.1) emissions and GHG removals in a *product system* (3.2.13), expressed as *CO2 equivalents* (3.1.2) and based on a life cycle assessment using the single impact category of climate change

[SOURCE: ISO 14067:2018, 3.1.1.1, modified — Notes 1 and 2 to entry have been deleted.]

3.1.2
carbon dioxide equivalent
CO_2 equivalent
CO_2e
unit for comparing the *radiative forcing* (3.5.4) of a *greenhouse gas (GHG)* (3.4.1) to that of carbon dioxide

Note 1 to entry: Mass of a GHG is converted into CO_2 equivalents by multiplying the mass of the GHG by the corresponding global warming potential (GWP) or global temperature change potential (GTP) of that gas.

Note 2 to entry: In the case of GTP, CO_2 equivalent is the unit for comparing the change in global mean surface temperature caused by a GHG to the temperature change caused by CO_2.

[SOURCE: ISO 14067:2018, 3.1.2.2]

3.1.3
partial carbon footprint of a product
partial CFP
sum of *greenhouse gas (GHG)* (3.4.1) emissions and GHG removals of one or more selected process(es) in a *product system* (3.2.13), expressed as *CO2 equivalents* (3.1.2) and based on the selected stages or processes within the *life cycle* (3.2.10)

Note 1 to entry: A partial CFP is based on or compiled from data related to (a) specific process(es) or footprint information modules, which is (are) part of a product system and can form the basis for quantification of a CFP. More detailed information on information modules is given in ISO 14025:2006, 5.4.

Note 2 to entry: "Footprint information modules" is defined in ISO 14026:2017, 3.1.4.

Note 3 to entry: The results of the quantification of the partial CFP are documented in the CFP study report expressed in mass of CO_2 equivalent per *declared unit* (3.2.14).

[SOURCE: ISO 14067:2018, 3.1.1.2]

3.2 Products, product systems and processes

3.2.1
product
any goods or service

[SOURCE: ISO 14050:2020, 3.5.2]

3.2.2
product category
group of *products* (3.2.1) that have an equivalent function

3.2.3
primary product
primary output of commercial value from a production process

3.2.4
by-product
secondary output from a process, but of commercial value, that is produced in addition to a defined *primary product* (3.2.3)

3.2.5
intermediate goods
raw materials or semi-finished goods, which may be recycled or recovered, that are fed into the *product system* (3.2.13)

3.2.6
capital goods
products (3.2.1) that are not used up in consumption or production over a brief period but that retain their function over a longer time

3.2.7
seafood
food, of which a significant proportion of the content derives directly from animals or plants that live in the sea, lakes or watercourses

3.2.8
finfish
products (3.2.1) from fisheries and aquaculture as defined by the Food and Agriculture Organization (FAO)

Note 1 to entry: Finfish species and their yearly production volumes are available in FishStatJ[7] and regularly published by the FAO Fisheries and Aquaculture Department, available from: http://www.fao.org/fishery/statistics/en.

3.2.9
edible product
quantity of fish and fish *products* (3.2.1) as available for sale from a retailer, excluding packaging

3.2.10
life cycle
consecutive and interlinked stages of a *product system* (3.2.13), from raw material acquisition or generation from natural resources to final disposal

[SOURCE: ISO 14040:2006, 3.1]

3.2.11
value chain
range of activities or parties that create or receive value in the form of *products* (3.2.1) or services

3.2.12
carbon footprint of a product – product category rules
CFP–PCR
set of specific rules, requirements and guidelines for *CFP* (3.1.1) or *partial CFP* (3.1.3) quantification and communication for one or more *product categories* (3.2.2)

[SOURCE: ISO 14067:2018, 3.1.1.10, modified — Notes 1 and 2 to entry have been deleted.]

3.2.13
product system
collection of unit processes with elementary and product flows, performing one or more defined functions, and which models the *life cycle* (3.2.10) of a *product* (3.2.1)

[SOURCE: ISO 14040:2006, 3.28]

3.2.14
declared unit
quantity of a *product* (3.2.1) for use as a reference unit in the quantification of a *partial carbon footprint of a product (CFP)* (3.1.3)

EXAMPLE Mass (1 kg of primary steel), volume (1 m^3 of crude oil).

[SOURCE: ISO 14067:2018, 3.1.3.8]

3.2.15
functional unit
quantified performance of a *product system* (3.2.13) for use as a reference unit

Note 1 to entry: As the *carbon footprint of a product (CFP)* (3.1.1) treats information on a *product* (3.2.1) basis, an additional calculation based on a *declared unit* (3.2.14) can be presented.

[SOURCE: ISO 14067:2018, 3.1.3.7]

3.2.16
allocation
partitioning the input or output flows of a process or a *product system* (3.2.13) between the product system under study and one or more other product systems

[SOURCE: ISO 14040:2006, 3.17]

3.2.17
energy carrier
substance of phenomena that can be used to produce mechanical work or heat, or to operate chemical or physical processes

[SOURCE: ISO 16818:2008, 3.75]

3.2.18
fishing gear
aids used to retrieve biological material from the sea or freshwater but that are not integrated parts of the fishing vessel

3.2.19
refrigerant
medium that is used to maintain a specified temperature, e.g. in a room lower than ambient temperature, through switching between aggregate states by the medium readily taking up or releasing heat

3.2.20
cut-off criterion
specification of the amount of material or energy flow or the level of environmental significance associated with unit processes or *product system* (3.2.13) to be excluded from the study

[SOURCE: ISO 14040:2006, 3.18]

3.2.21
direct land use change
dLUC
change in human use or management of land within the organizational boundaries and as part of upstream or downstream activities

[SOURCE: ISO/TR 14069:2013, 3.2.4]

3.2.22
indirect land use change
iLUC
change in the use or management of land that is a consequence of *direct land use change* (3.2.21) not taking place within the operational boundaries of the *greenhouse gas (GHG)* (3.4.1) inventory

[SOURCE: ISO/TR 14069:2013, 3.2.5]

3.3 Data and data quality

3.3.1
primary data
quantified value of a process or an activity obtained from a direct measurement or a calculation based on direct measurements

Note 1 to entry: Primary data need not necessarily originate from the *product system* (3.2.13) under study because primary data could relate to a different but comparable product system to that being studied.

[SOURCE: ISO 14064-1:2018, 3.2.2, modified — Note 1 to entry has been replaced.]

3.3.2
secondary data
data obtained from sources other than *primary data* (3.3.1)

Note 1 to entry: Such sources can include databases and published literature validated by competent authorities.

[SOURCE: ISO 14064-1:2018, 3.2.4]

3.3.3
data quality
characteristics of data that relate to their ability to satisfy stated requirements

[SOURCE: ISO 14040:2006, 3.19]

3.3.4
statistical representativeness
characteristic of a survey that requires it to be sufficiently large, to not include systematic measurement errors and to be based on a random sample of measured objects

3.4 Greenhouse gases

3.4.1
greenhouse gas
GHG
gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds

Note 1 to entry: For a list of GHGs, see the latest Intergovernmental Panel on Climate Change (IPPC) Assessment Report.

Note 2 to entry: Water vapour and ozone are anthropogenic as well as natural GHGs, but are not included as recognized GHGs due to difficulties, in most cases, in isolating the human-induced component of global warming attributable to their presence in the atmosphere.

Note 3 to entry: The focus of this document is limited to long-lived GHGs and it therefore excludes climate effects due to changes in surface reflectivity (albedo) and short-lived *radiative forcing* (3.5.4) agents (e.g. black carbon and aerosols).

[SOURCE: ISO 14064-1:2018, 3.1.1, modified — Note 3 to entry has been added.]

3.4.2
greenhouse gas emission
GHG emission
release of a *GHG* (3.4.1) into the atmosphere

[SOURCE: ISO 14064-1:2018, 3.1.5]

3.5 Waste, storage and transport

3.5.1
waste
output flow of no commercial value from a process

3.5.2
landfill
more or less permanent storage of *waste* (3.5.1)

3.5.3
steaming
bi-directional movement of a vessel between a fishing ground and a landing place

3.5.4
radiative forcing
difference between incoming solar radiation on the Earth and outgoing thermal radiation from the Earth

Note 1 to entry: A positive radiative forcing tends to warm the surface and a negative radiative forcing tends to cool the surface.

4 Calculation and communication requirements

This document only provides rules for calculating a product's potential climate impact and cannot be used in isolation for specifying a product's overall environmental or sustainability characteristics. However, the carbon footprint may be included as one of several indicators in the evaluation of a product's overall environmental or sustainability characteristics.

Calculation and communication of carbon footprints shall be:

— seen from an LCA perspective;

— seen in relation to functional units or a declared unit;

— iteratively approached;

— scientifically founded;

— relevant;

— complete;

— coherent;

— consistent;

— accurate;

— transparent;

— free of double counting.

For further information linked to each of these principles, see ISO 14067:2018, Clause 5. A particular reference is made to the iterative characteristics of the LCA methodology.

