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Date: 29 March 2024

Origin: International

**Latest date for receipt of comments: 22 May 2024**

Project No. 2024/01040

Responsible committee: W/- Consumer Products and Services Sector Policy and Strategy Committee

Interested committees:

Title: Draft BS ISO 20423 Carbon Footprint for seafood - Product category rules (CFP-PCR) for macroalgae.

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## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

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## Submission of Comments

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## Template for comments and secretariat observations

|                  |                        |
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| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/ Figure/Table/Note | Type of comment | Comment (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |



# DRAFT International Standard

## ISO/DIS 20423

### Carbon footprint for seafood — Product category rules (CFP-PCR) for macroalgae

ICS: 67.120.30

ISO/TC 234

Secretariat: **SN**

Voting begins on:  
**2024-03-29**

Voting terminates on:  
**2024-06-21**

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ISO/DIS 20423:2024(en)

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Published in Switzerland

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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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](http://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](http://www.iso.org/members.html).

## Introduction

With the increasingly serious global climate problem, the "low-carbon revolution" of globalization is rising, and "carbon peaking" and "carbon neutrality" have become important goals of global low-carbon development. Countries all over the world are actively carrying out "double carbon" research to achieve the goal of "carbon neutrality" as soon as possible.

As an important participant in the ocean carbon cycle, algae can synthesize organic matter through photosynthesis and release oxygen to achieve carbon sequestration, so it is of great significance to study its carbon footprint.

This document contains product category rules for the calculation and communication of the carbon footprint of macroalgae product, providing a convenient and feasible carbon footprint evaluation basis for the macroalgae farming industry.

This document sets out rules for the calculation and communication of farmed macroalgae products, which are applicable to the evaluation of the carbon footprint of the entire value chain of farmed macroalgae. The methodology is based on the requirements of the life cycle assessment and international standards for the carbon footprint of 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 macroalgae 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 database for calculating the carbon footprint of macroalgae products;
- a basis for internal improvement efforts in the macroalgae industry;
- an improved knowledge base concerning the value chains of macroalgae products, their resource consumption and climate impacts;
- A basis for further understanding the environmental impact of macroalgae 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 macroalgae products. It will also provide incentives to drive further improvements and reduce energy consumption and climate impacts from all links in macroalgae value chains. To promote the transformation and development of global fishery industry structure and the innovative development of low-carbon technology, so as to realize the low-carbon fishery, increase the carbon sink of fishery, and make due contributions to the global low-carbon goal.

# Carbon footprint for seafood — Product category rules (CFP-PCR) for macroalgae

## 1 Scope

This document specifies requirements for calculating the carbon footprint specific to farmed macroalgae 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 farmed macroalgae products' carbon footprints from seedling production to the consumption of macroalgae products. It is applicable to the carbon footprints of products from 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 constitute the essential provisions of this document through the normative references in the text. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14040:2006, *Environmental management — Life cycle assessment — Principles and framework*

ISO 14044:2006, *Environmental management — Life cycle assessment — Requirements and guidelines*

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

## 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 *CO<sub>2</sub> 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<sub>2</sub> equivalent****CO<sub>2</sub>e**

unit for comparing the *radiative forcing* ([3.4.3](#)) of a *greenhouse gas* ([3.4.1](#)) to that of carbon dioxide

Note 1 to entry: Mass of a GHG is converted into CO<sub>2</sub> 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<sub>2</sub> equivalent is the unit for comparing the change in global mean surface temperature caused by a GHG to the temperature change caused by CO<sub>2</sub>.

[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 *CO<sub>2</sub> 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<sub>2</sub> 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

[SOURCE: ISO 22948:2020, 3.2.3]

**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](#))

[SOURCE: ISO 22948:2020, 3.2.4]

**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](#))

[SOURCE: ISO 22948:2020, 3.2.5]