International Standard

ISO 20423

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

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

First edition
2025-06

Reference number
ISO 20423:2025(en)

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Published in Switzerland

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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 document 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.

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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 products, 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. This document promotes the transformation of the global fishery industry structure and the innovative development of low-carbon technology, which can contribute to realizing the construction of low-carbon fishery and increasing the carbon sink of fishery, thus making due contribution to the global low-carbon development.

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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 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*

3 Terms and definitions

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

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

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

— IEC Electropedia: available at https://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* (3.2.14), expressed as *CO_2 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 deleted.]

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