

# Product Category Rules (PCR)

for preparing an Environmental Product Declaration  
(EPD) for Product Group

## Wild caught fish

### **Table of contents:**

1. General information .....	2
2. Product description.....	2
3. List of materials and chemical substances .....	2
4. Functional unit.....	3
5. System boundaries.....	3
6. Cut-off rules .....	5
7. Allocation rules .....	6
8. Units .....	6
9. Calculation rules and data quality requirements .....	6
10. Parameters to be declared in the EPD .....	7
11. Recycling declaration.....	7
12. Other environmental information.....	7
13. References .....	7

## **1. General information**

These Product Category Rules are intended for wild caught fish, a subcategory of fish food product. The rules apply to wild caught fish, defined as a food product intended for human consumption or a processed or unprocessed feed for other animals intended to be used for human food consumption. Other functions that the product may provide are not considered herein.

Only wild caught fish that comes from fisheries with a fishery management plan based on regular scientific advice on sustainable exploitation are considered for this Product Category Rules.

This document specifies the requirements for the LCA study and for the format and content of the EPD itself. Recognising the global aspects of the fishing industry, the geographical coverage is global.

The PCR document has been prepared by Erwin Meissner Schau at SINTEF Fisheries and aquaculture and the Norwegian University of Science and Technology in accordance with ISO/CD 14025 and the Norwegian adaptation of this standard (NEPD 2004).

The EPD and criteria are meant as a supplement and complement to other eco-labelling scheme like KRAV and MSC and other organic and or biological schemes, even there may be overlap in some fields.

## **2. Product description**

The product or range of product will be identified as a product where the edible contain of the product is more than 95 % (weight) fish.

The packaging following the product should be included in the analysis.

The relevant impact categories are listed in section 9.

In accordance with the “Requirements for an International EPD scheme”, similar products (i.e. products with different additive ingredients) can be included in the same declaration provided that the range of variation within each impact category does not exceed  $\pm 5$  %. The non quantified impact categories have to be the same.

## **3. List of materials, chemical substances and fishery specific environmental aspects**

The materials and substances listed below must be reported in the environmental product declaration (EPD). The emissions listed in b1 and b2 are the emissions that are considered to be the most relevant from the fishing industry.

- a) Product specifications, consisting of:
  1. Species (common name and Latin name) and origin of catch
  2. Ingredients composition, in gram per functional unit (FU) and in percentage of weight landed fish on deck.
- b) Emissions (sorted by main phases of the life cycle – see fig. 1):
  1. Emissions to air, in gram per FU, including:

- i. Fossil CO<sub>2</sub>
    - ii. CH<sub>4</sub>
    - iii. N<sub>2</sub>O
    - iv. NO<sub>x</sub>
    - v. SO<sub>x</sub>
    - vi. HC
    - vii. CO
    - viii. NMVOC
    - ix. Dioxins
    - x. Heavy metals (specified)
  2. Emissions to water, in gram per FU, including:
    - i. Phosphates
    - ii. Nitrates
    - iii. Dioxins
    - iv. Heavy metals (specified)
  3. Wastes, in gram per FU, sorted by:
    - i. Material recycling.
    - ii. Incineration with energy recovery.
    - iii. Incineration without energy recovery.
    - iv. Disposal.
    - v. Hazardous waste.
- c) Fishery specific environmental aspects
  1. Fishing gear type used
  2. Sea floor use
    - i. If active fishing gears are used on the sea bottom, the swept area per FU should be reported.
  3. By-catch
    - i. Mass and species of by-catch per FU should be reported
  4. Discard
    - i. Mass and species of discard per FU should be reported
  5. Lost fishing gears
    - i. If fishing gears are lost and not found and collected within 24 hours, type of fishing gear and size should be reported.

## 4. Functional unit

The functional unit for the life cycle assessment is 1 kg fish delivered to the main target audience (i.e consumer) of the EPD document. This main target audience has to be named.

The EPD shall provide information for the entire physical product. Aggregated results for the net mass content of the packaging shall be reported. The reported mass must be clearly specified on the front page of the EPD.

## 5. System boundaries

The entire life cycle is to be covered. This includes all industrial processes from raw material extraction and production, processing, use and maintenance, transportation, and disposal. Rules on how recycling processes should be handled are described in detail in chapter 7, Allocation rules.

In general, production of capital goods, infrastructure, and personnel related activities are not included, with the exception of the fishing vessel that should be included. Personnel related activities on the fishing boat can be included. This should be clearly described in the description of the system boundaries.

Naturally occurring consumption and release of CO<sub>2</sub> are not included. This is to avoid counting of CO<sub>2</sub> in the natural cycle. Emissions linked to the depletion of natural resources (e.g. fish stocks depletion or deforestation) such that the natural CO<sub>2</sub>-cycle is influenced, are not considered to be part of the natural cycle and should be included.

A flow chart like figure 1 should be used to illustrate the system boundaries. If the EPD does not cover the entire life cycle (cradle to grave) this shall be clearly stated on the front page of the EPD. Alternative statements for the following system boundaries are:

AEF: This declaration covers environmental impacts throughout the product life cycle, from raw material extraction to packaging and disposal, inclusive.

AEG: This declaration covers environmental impacts from raw material extraction to consumption, inclusive. The declaration does not cover packaging and rest product disposal, and is therefore not comparable to declarations that cover the entire product life cycle.

A: This declaration covers environmental impacts from raw material extraction to production, inclusive. The declaration does not cover retailing, consumption and disposal, and is therefore not comparable to declarations that cover the entire product life cycle.

D: This declaration is a module environmental product declaration. It covers the fishing vessel/gear maintenance, fishing and fishing vessel/gear disposal. Raw material extraction and production, retailing, consumption and disposal are not included.

Processes that are not included should be indicated by solid drawn lines, while processes that are not included should be indicated by stippled lines.

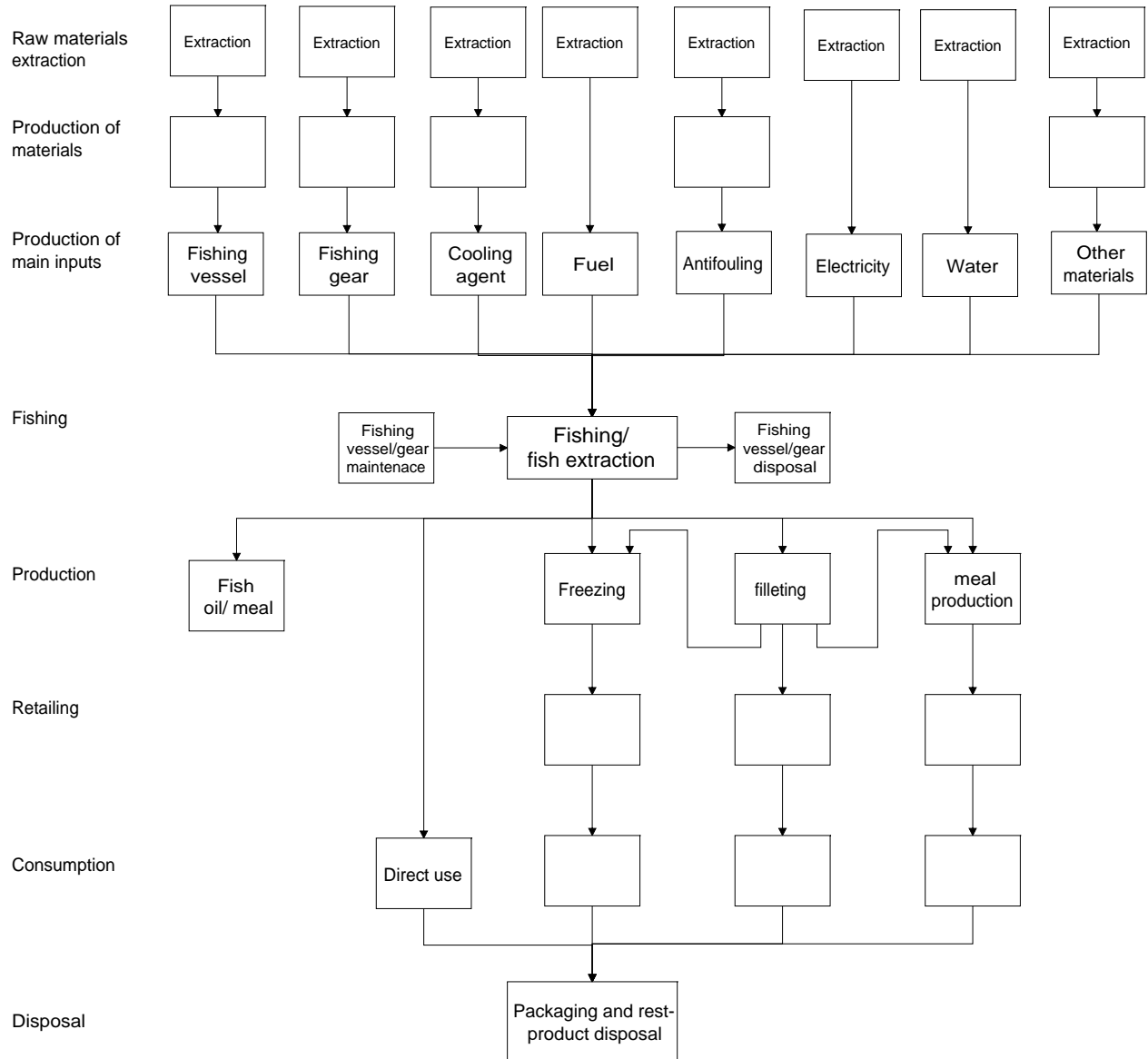


Fig 1: Flow chart of system for indicating system boundaries (arrows indicate eventual transport and/or intermediate storing)

## 6. Cut-off rules

Processes and activities that contribute to less than 1 % of the total environmental impact for any impact category are allowed to be omitted from the inventory analysis.

By-catch species that constitutes less than 1 % of the mass of the target species and are not in the IUCN Red List can be omitted from the specification in the EPD.

Components and materials of composition similar to the major components (>20 weight %) in the inventory list may be assumed to have the same environmental impact in percent as their weight percentage, and may therefore be excluded on weight basis alone.

## 7. Allocation rules

Allocations should where possible be avoided by system expansion or disaggregation. Deviation from this rule should be explained. If there is not possible to avoid allocation, then the system under study should be investigated for physical relationship, that could be basis for allocation. If that is not possible, then the following methods of allocation are preferred:

- Multi-output processes: Allocation based on the economical relationships between the output products.
- Multi-input processes: Allocation based on physical relationships (i.e. mass balances).
- Open loop recycling: No allocation should be made for materials subject to recycling. The recycling processes are included when recycled materials are used as inputs. Outputs subject to recycling are regarded as outputs to the next life cycle.

Deviation from these allocation rules must be documented and reasoned for.

## 8. Units

SI units shall be used for both the LCA and the EPD.

## 9. Calculation rules and data quality requirements

Specific data should always be used in the upstream phases (extraction, production of materials, production of main inputs and fishing). Information from databases may be regarded as specific data, if they fulfil the following requirements:

1. Representative of the geographical area, i.e. from areas with same legislative framework and same energetic mix.
2. Technological equivalence.
3. Boundaries towards nature, i.e. data shall report all the quantitative information (resources, emissions, etc.) necessary for the EPD redaction.
4. Boundaries towards technical systems must be identical.

Generic data for the downstream processes; retailing, consumption and sewage treatment are preferred. The generic data should relate to the geographical region where the phases involved are most likely to happen.

Data on by-catch should be calculated on the basis of good and representative sampling.

Data should represent annual averages from a specific year. Deviation from this must be specified in the EPD. Impact assessment categories and calculation methods are listed in Table 1.

**Table 1 – Impact assessment categories and calculation methods.**

Impact assessment category	Calculation method
1. Global warming potential (GWP 100 years) [gram CO <sub>2</sub> -eq.]	CML 2001
2. Ozone layer depletion potential (ODP, steady state) [gram CFC11 (R11)-eq.]	CML 2001
3. Acidification potential (AP) [gram SO <sub>2</sub> ]	CML 2001
4. Photochemical ozone creation potential (POCP) [gram ethen-eq.]	CML 2001
5. Eutrophication potential (EP) [gram phosphate-eq.]	CML 2001
6. Marine aquatic ecotoxicity [gram 1,4-DB eq.]	CML 2001

## 10. Parameters to be declared in the EPD

The following parameters must be declared in the EPD:

- a) Material resources, sorted by:
  - a) Virgin renewable resources:
    - i. Fish
      1. Mass wet round weight
      2. Net primary production
    - ii. Other virgin renewable resources
  - b) Recycled renewable resources.
  - c) Virgin non-renewable resources.
  - d) Recycled non-renewable resources
- b) Land usage and sea floor usage
- c) Energy consumption:
  - a) Fossil fuels
  - b) Nuclear fuels
  - c) Renewable fuels
  - d) Miscellaneous fuels (surplus heat, incineration of waste)
- d) Impact assessment categories, as specified in section 9.
- e) Emissions, wastes and fishery specific environmental aspects, as specified in section 3b and c.

## 11. Recycling and waste handling declaration

A recycling declaration may include information on aspects that are important for the understanding and appreciation of the recycling properties of the packaging following the product and waste handling of residual product. The recycling declaration may also include information about the dismantling of packaging and reuse of materials.

- Information on suitable procedures for recovery of selected parts of the entire products
- Information on a proper handling of the product as waste at the end of its life cycle, (i.e. fish bones composting, recycling of packaging)

## 12. Other environmental information

This part should include:

1. List of products in the inventory assessment from suppliers with certified environmental management system, if any.
2. List of products in the inventory assessment from suppliers with environmental declarations (Type I, II or III), if any.

Information may be included on aspects how the product should be handled during storing and consumption to reduce environmental impacts. Other factors such as noise, visual impact, risk related issues, HSE (i.e. accidents) may also be included in this section. If the product or part of it is in an eco-labelling scheme, this information can be included here.

## 13. References

The EPD shall refer to:

- The national/regional guidelines for Environmental Product Declarations.
  - Norway: NEPD Næringslivets Stiftelse for Miljødeklarasjoner (2004): Retningslinjer for Næringslivets Stiftelse for Miljødeklarasjoner. Oslo: NEPD.

- Sweden: Requirements for Environmental Product Declarations, EPD, (MSR 1999:2) published by the Swedish Environmental Management Council at [www.environdec.com](http://www.environdec.com)
- The relevant PCR document.
- The underlying LCA report. There has to exist an open version of the LCA report.
- Other documents that verify and complement the EPD.

## **14. EPD format**

The format of the environmental product declaration shall be structured as follows:

1. Front page:
  - a) Picture of product
  - b) Manufacturer's name and contact information.
  - c) Information on the EPD programme operator.
  - d) Date of certification and period of validity.
  - e) Functional unit.
  - f) Key environmental parameters:
    - i. Global warming potential
    - ii. Total energy consumption
    - iii. Fishing gear type used
    - iv. Total by-catch
    - v. Total discard
2. Product specifications, as described in section 3a.
3. Material resources, sorted by:
  - a) Virgin renewable resources:
    - i. Fish
    - ii. Other virgin renewable resources
  - b) Recycled renewable resources.
  - c) Virgin non-renewable resources.
  - d) Recycled non-renewable resources
4. Land usage and sea floor usage.
5. Energy consumption:
  - a) Fossil fuels
  - b) Nuclear fuels
  - c) Renewable fuels
  - d) Miscellaneous fuels (surplus heat, incineration of waste)
6. Impact assessment categories, as specified in section 9.
7. Emissions, wastes and fishery specific environmental aspects, as specified in section 3b and c.
8. Recycling and waste handling declaration
9. Methodological information:
  - a) Criteria for including flows.
  - b) Statement on excluded processes.
  - c) Allocation rules.
  - d) Data quality (percentage specific/generic data).
  - e) Graphical presentation of product system.
10. Additional information, as specified in section 12.
11. References, as specified in section 13.