Copenhagen
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EFFOP
Marine Nutrients Europe

Danish Presidency of the Council of the European Union
Council of the European Union General Secretariat

Marine proteins for food and feed – supply, production and sustainability

EFFOP - Marine Nutrients Europe brings together national industry associations and companies from 14 European countries committed to the responsible sourcing and processing of fish and fish by-products into high quality marine ingredients that serve essential functions in the aquaculture and agriculture sectors and support sustainable food systems.

Marine ingredients such as fishmeal and fish oil are characterized by their outstanding nutritional value, high quality, full traceability and a low carbon footprint. Marine proteins contain important nutrients such as essential amino acids and omega-3 fatty acids and play a key role in the production of healthy and nutritious foods and in circular food production.

EFFOP welcomes the initiative of the Danish Presidency to bring to the table the importance of proteins for food and feed and to address issues such as supply, production and sustainability. However, the preparatory note [i] for the Agriculture and Fisheries Council of 14 July focuses mainly on plant proteins and does not include marine proteins in the discussion on a future protein strategy.

Marine proteins are an important complement to other protein sources and should be part of a comprehensive and balanced approach to sustainable protein supply in Europe. In addition to producing nutritious marine proteins with a low carbon footprint, Europe has the advantage of having a strong production capacity and a high degree of self-sufficiency.

Our industry transforms what was once considered waste (fish trimmings) into high-value, nutrient-rich feed ingredients. This ensures near-zero landings waste, reduces pressure on food-grade fisheries and significantly lowers the environmental footprint per tonne of feed produced. In fact, up to 40% of the raw materials used to produce fishmeal and fish oil are by-products from the fish processing industry, with the remainder being small, oily pelagic species that have limited direct demand for human consumption (such as sandeel, Norway pout and blue whiting).

Production also has a low carbon footprint. Compared to plant-based alternatives such as soy and rapeseed, marine ingredients used in aquaculture feeds have a significantly lower carbon footprint. This can be measured using a Life Cycle Assessment (LCA), a robust and transparent method of assessing the environmental impact of the entire production chain. The Danish LCA database shows that fishmeal has an average carbon footprint of 0.912 kg CO_2 eq per kg. Compared to the carbon footprints of soy protein (meal and protein concentrate) or insect meal, fishmeal has a carbon footprint that is 3-6 times lower. Similarly, fish oil has a carbon footprint of 1.535 kg CO_2 eq per kg, which is almost half the emissions of rapeseed oil. We compare fishmeal and fish oil with soybean meal and canola oil because they are among the most widely used protein feed ingredients globally. This makes them particularly relevant as benchmarks for assessing the carbon footprint of different protein sources and oil products in the feed industry.

Moreover, we would like to remind you that the European Union is committed to the development of sustainable aquaculture. Indeed, aquaculture has a lower carbon footprint than many other forms of food production, and farmed fish are generally considered to be among the more sustainable sources of animal-

Vester Farimagsgade 3,1, 1606 Copenhagen V, Denmark
E: effop@maring.org, W: www.effop.org
TAX number / CVR DK: 37555738

based food. Approximately 75% of the world's fishmeal and fish oil is used in aquaculture. Despite considerable research into alternative feed ingredients, fishmeal and fish oil are still considered to be among the most nutritious and easily digestible ingredients for feeding farmed fish. Their use not only contributes to the development of the European aquaculture sector and the EU's goals of food sovereignty and increased self-sufficiency but also supports animal welfare by adding essential amino acids and omega-3 fatty acids to the feed.

As concrete proposals to the question addressed to Member States in the preparatory note *"What actions should be taken at EU level to support the diversification of protein sources for food and feed?"*, we would like to draw your attention to the catalogue of actions developed by eight European organisations[ii].

Two of them are related to marine proteins:

- Use of fishmeal in feed intended to ruminants
  The use of fishmeal in ruminant feed is currently banned under the TSE Regulation, despite the fact that the potential health risks associated with the feeding of fishmeal to ruminants in terms of TSE transmission have been assessed by EFSA as minimal or non-existent. Lifting the ban on the use of fishmeal and compound feed containing fishmeal in ruminant feed on the basis of an updated scientific opinion from EFSA would therefore contribute to increased circularity.

- Expand the definition of fish meal and fish oil
  The current definitions of fishmeal and fish oil in Annex I of Commission Regulation (EU) No 142/2011 only allow the use of farmed aquatic invertebrates in their production. The inclusion of low-trophic aquatic invertebrates (such as tunicates, echinoderms and annelids) in the definitions would allow the aquaculture and feed industries to tap into currently underutilized marine resources.

To conclude, marine proteins such as fishmeal and fish oil are a well-documented, nutritious and climate-friendly source of protein that plays a crucial role in the blue value chain. We therefore call for marine proteins to be recognized and included in this work – both as part of sustainable feed solutions and as a strategically important element of the EU's overall proteins for food and feed policy.

We appreciate your consideration of these contributions. We remain at your disposal for any further information you may require regarding these proposals.

A Mette Bæk

Anne Mette Bæk
CEO of EFFOP – Marine Nutrients Europe

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[i] ST-10940-2025-INIT_en
[ii] EU Feed Circularity Catalogue – Existing legal restrictions to enhanced animal feed circularity
Cooperative work from the following organisations: European Chemical Industry Council (CEFIC), EFFOP – Marine Nutrients Europe (EFFOP), European Former Foodstuff Processors Association (EFFPA), European Fat Processors and Renderers Association (EFPRA), European Sustainable Phosphorous Platform (ESPP), European Pet Food Association (FEDIAF), European Feed Manufacturers' Federation (FEFAC) and International Platform of Insects for Food and Feed (IPIFF)