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SEA2LAND

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Normative considerations of fishery and aquaculture by-products as feedstocks for BBFs

Main results / outcomes

Within the context of the European bioeconomy Action Plan, the European Fertilizing Product Regulation (EU) 2019/1009 (FPR) plays a crucial role in facilitating and encouraging the reintroduction of secondary raw materials and nutrients into food production chains. This regulation contemplates the inclusion of animal by-products (ABPs) and their derivatives, which are excluded from human consumption and currently fall under EU Regulation (EC) No 1069/2009. ABPs are defined as by-products generated within the food production chains when animals are processed and transformed. Those by-products are strictly regulated in the EU in terms of use, storage, processing, and disposal. That means they are subject to the (veterinary) controls and other prerequisites including the obligation for registration, documentation, notification and approval for handling, transport and storage.

The current normative pathways allow the transformation of this kind of by-products into fertilizing products. However, it lacks detailed clarity those streams in which we find some of the by-products generated in the fishery and aquaculture industry. Despite this uncertainty, reaching a clearly defined end-point for ABP in the manufacturing chain is the initial and crucial step for its valorization. Once this end-point is attained, the by-product is no longer subject to controls (such as veterinary), thereby enabling the recycling of its resources.

Practical recommendations

Animal by-products are classified into specific categories based on their potential risk to public and animal health. The so-called end-point in the manufacturing chain is achieved by applying and certifying authorized transformation processes. In general, pressure sterilization ensures the prevention of risks to public and animal health, thus unlocking potential valorization pathways. Within the Sea2Land project, some of the feedstocks transformed into Bio-Based Fertilizers (BBFs) include aquatic animals and their parts without signs of communicable diseases to humans or animals. This includes fish and shellfish waste, viscera, flesh, heads, and frames which are clearly defined in the mentioned ABP regulation.

However, we find difficult the categorization of other fishery and aquaculture industry-derived by-products valorized in Sea2Land under the definition of ABP. Examples include (i) shells from shellfish with removed soft tissue and flesh, (ii) sludges from wastewater treatment in recirculating aquaculture systems or gathered from open aquaculture systems, and (iii) cooking brines from fish-products in the canning industry. Further clarification and a precise, unambiguous definition of these fish and aquaculture by-products within the ABP Regulation framework are necessary. This clarification would facilitate and potentially enhance the implementation of circular bioeconomy strategies in the fishery and aquaculture sectors, promoting diversified business models and their overall sustainability.

About this abstract

Authors: Nagore Guerra, Miguel Martínez, Pablo Martín Binder,– BETA-Technological Center (UVic-UCC).
Bente Foereid, Norwegian Institute of Bioeconomy Research (NIBIO)
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SEA2LAND project is a collaborative Innovation Action(IA) funded by the EU in the frame of the Horizon 2020 programme. The project aims to provide solutions to help overcome challenges related to food production, climate change and waste reuse. Based on the circular economy model, SEA2LAND promotes the production of large-scale fertilisers in the EU from own raw materials. This solution is expected to reduce the soil nutrient imbalance in Europe.

The project is running from January 2021 to December 2024.

Website: www.sea2landproject.eu

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