

ThermoMechanoChemical (TMC) fractionation of aquaculture by-products by twin-screw extrusion for the production of biobased fertilisers

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Laure Candy¹, V. Vandenbossche², W. Tapia¹, L. Deramond¹, M. Picard¹, C. Raynaud¹

¹Centre d'Application et de Traitement des Agroressources (CATAR), INPT, Toulouse, France ;

²Laboratoire de Chimie Agro-industrielle, LCA, Université de Toulouse, INPT, INRAe, Toulouse, France

laure.candy@ensiacet.fr

SEA2LAND: Producing advanced bio-based fertilizers from fisheries wastes

The SEA2LAND project is a 4-year collaborative Innovation Action (IA) funded by the EU in the frame of the Horizon 2020 programme. Based on the circular economy model, SEA2LAND promotes the production of fertilisers in the EU from own raw materials. This solution is expected to reduce the soil nutrient imbalance in Europe.

4 YEARS

26 PARTNERS

11 COUNTRIES

+ 8.8 M€

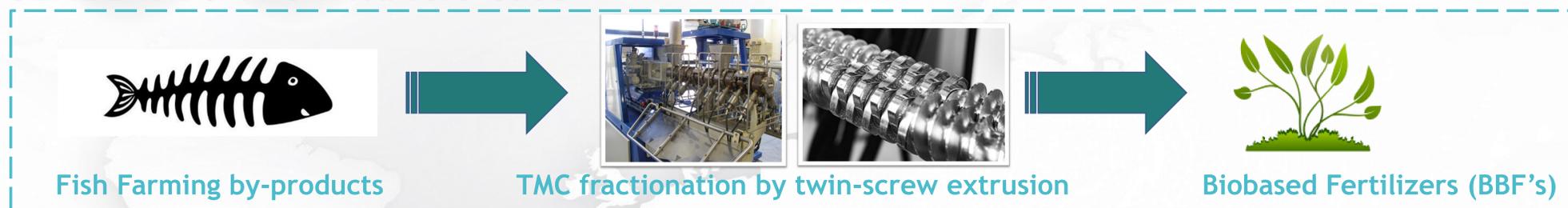
- Improve and adapt nutrient recovery technologies to produce bio-based fertilisers (BBF) from the processing of fish and aquaculture by-products.
- Promote large-scale fertiliser production in the EU from home-grown raw materials, based on the circular economy model, transforming by-products into nutrients for crops.
- Contribute to the independence and security of supply of nutrients to European agriculture, reducing the nutrient imbalance in Europe.

9 TECHNOLOGIES IN

7 DEMONSTRATION PILOTS IN

6 REPRESENTATIVE AREAS OF THE EUROPEAN FISHERIES (North, Baltic, Atlantic, Cantabrian, Mediterranean and Adriatic)

SEA2LAND: The Atlantic case

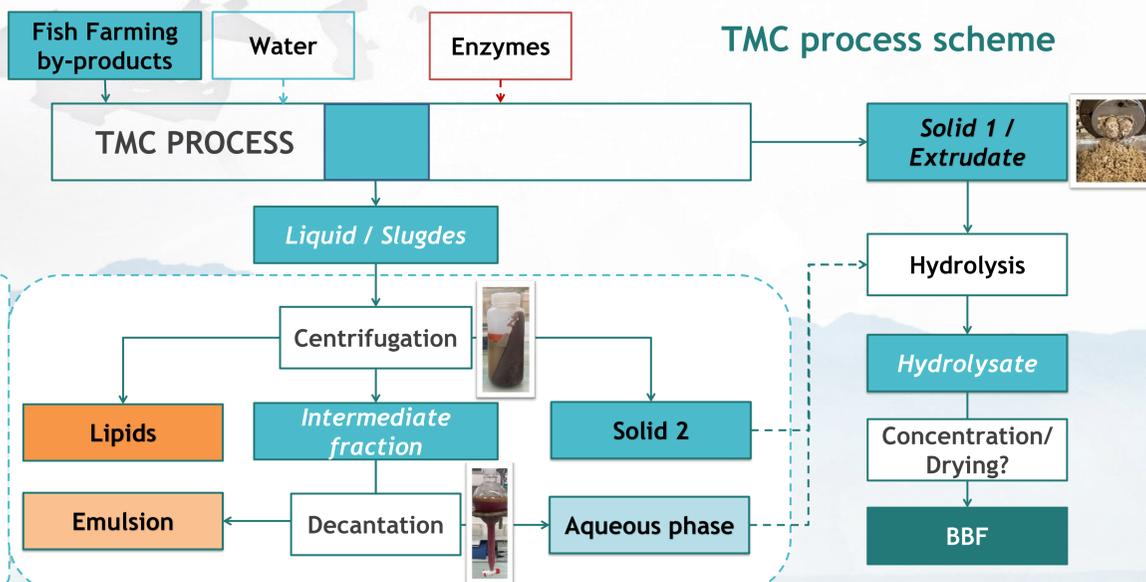


Fish farming by-products characterization

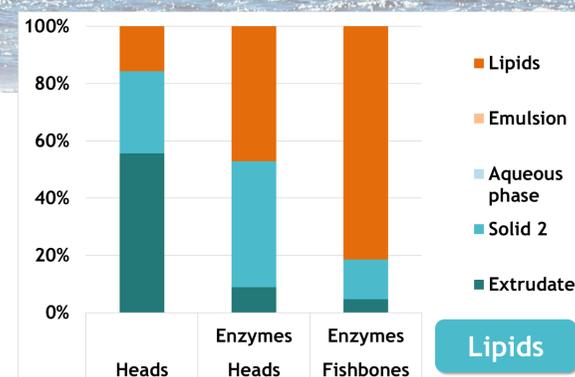
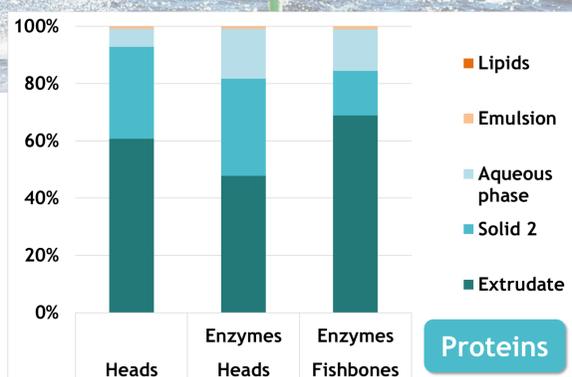
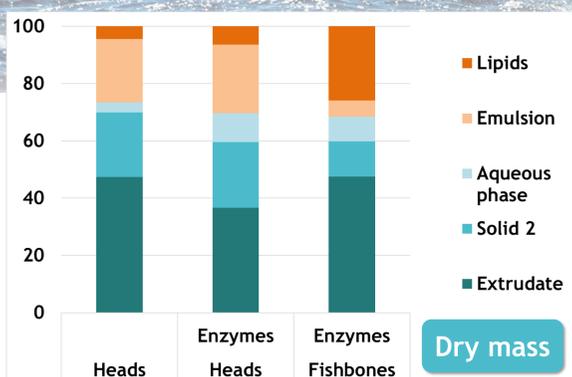
Fish Farmer = Pisciculture d'Ispeguy (Sincere acknowledgments for the supply of the by-products)



	Viscera	Heads	Fishbones
Dry matter (%)	35.0	34.0	36.0
Lipids (%/DM)	76.9 ± 0.5	38.8 ± 0.2	38.1 ± 0.2
Proteins (%/DM)	23.1 ± 0.2	37.5 ± 1.4	41.9 ± 2.1
Ashes (%/DM)	3.0 ± 0.3	11.2 ± 1.2	8.2 ± 0.8



Influence of enzyme's introduction in the TMC process on the repartition of dry mass, proteins and lipids



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