



Community Led Local Development (CLLD)

Turning shellfish by-products into energy

Shellfish farming is an important economic activity on the Atlantic French coast. But it also generates undersized mussels as by-products which are usually thrown away. This project focuses on exploiting their potential by generating methane to produce energy.

Description

Mussel farming, an important sector on Brittany's coast, generates co-products from the washing, sorting, and grading of shellfish, which are disposed of in the sea or on the beach. These discharges have a bad impact on the coastal environment, polluting the water and annoying residents and other users of the beach.

Cultimer France SAS, a mussel and oyster farmers' cooperative, has been studying the opportunities these products present since 2017. The Methacoque project, carried out in collaboration with local research institutions, showed that mussels could be a good source of methane. This led to new studies to get essential scientific and technical data to enable the practical implementation of this new use.

Through this FLAG project, Cultimer is finally putting lessons learnt into practice, by proving the technical and economic feasibility of using mussels as an energy source. The cooperative carried out a pilot to establish whether adequate volumes of the shellfish biomass could be turned into the fatty acids required to yield methane as energy.

Results:

The pilot plant is now running and able to process 50 kg of undersized mussels per day to turn them into methane. This is currently sold to external methane production plants, meaning that the shellfish farmers do not have to deal with the administrative burdens involved in producing methane. However, in the long term, this activity is seen as a potential new activity which can be added to the production chain in order to diversify and increase incomes.

50 kg of mussels produces 0.63 m³ of methane, equivalent to 0.75 l of gas, or 6 kWh of electricity. This practice has the advantage of turning the biomass of undersized mussels into a valuable product.

Transferability:

This project is intended to be reproduced and adapted to different mussel farm configurations in the Emerald Coast, Mont-Saint-Michel Bay area and beyond. The approach could also be applied to the treatment of organic waste from other fisheries, fish farms and food processors, allowing them to cut their environmental footprint by reducing waste and producing methane which can be used for various purposes, such as heating.

Lessons & contribution to CLLD objectives:



Lessons: COVID-19 has had a major impact on the project's schedule, causing delays in both manufacture and administrative procedures. To keep the project on schedule, it was essential to carry out upstream preparation by making the institutional decision-makers aware of the project's relevance. Moreover, the fact that the technical implementation of the project was entrusted to a single service provider undeniably allowed for rapid decisions and effective reactions.

Contribution to CLLD objective: enhancing and capitalising on the environmental assets of the fisheries and aquaculture areas, including operations to mitigate climate change.

Landing obligation: First study of implementation and impact on discards

A new study provides a first overview of the implementation of the landing obligation (LO). The study also looks at the impact of LO on discard rates.

Overall, it is concluded that control and enforcement of the landing obligation remain challenging, that Member States have not adopted the necessary control measures and that significant undocumented discarding of catches occur.

A key aspect of the study concerns the effectiveness and efficiency of traditional vs modern control tools to monitor the landing obligation. The study concludes that remote electronic monitoring (REM) tools are the most effective and cost-efficient means (although some stakeholders raised issues such as privacy and costs). REM has been trialled by various Member States, but not been rolled out on a large scale. In its proposal for a revised fisheries control system, currently negotiated with Council and Parliament, the Commission supports the use of such modern control tools. On the other hand, the study points to important shortcomings of traditional control tools (at-sea inspections and dockside/auction inspections of the landings/logbooks), as they only provide a snapshot of compliance at the time of monitoring.

Secondly, the study concludes that the discard rates do not yet show clear trends or patterns as a result of the landing obligation. It was considered that there is a lack of evidence of changes in discarding practice, and that discarding is still taking place. Stakeholders contributing to the study identified a number of possible explanations, including complex legislation and regulation and the substantial adaptation to be undertaken on board vessels. The study provides suggestions on how to alleviate these challenges through improved logbooks and trainings. While stakeholders have already worked on this during the transition phase, further room for improvement remains, according to the study.

Background

The landing obligation has been fully in force since 2019 after a phasing-in period from 2015 with the objective to gradually eliminate discards by avoiding and reducing as far as possible unwanted catches by ensuring that all catches are landed. Discarding unwanted catches at sea is a substantial waste of marine biological resources and negatively affects the financial viability of fisheries. The landing obligation encourages fishers to adapt their fishing patterns to avoid a waste of resources.



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The study had been commissioned with a view to improving the understanding of the measures put in place to facilitate LO implementation. Moreover, the study aimed to build up knowledge on how these measures contribute to reducing or avoiding unwanted catches by increasing selectivity, and eliminating discards.

Effective control and enforcement are essential to the success of the landing obligation. Due to the failure to adopt the necessary means, such as REM, indications point towards widespread non-compliance and prolific, undocumented illegal discarding of catches. This represents a significant risk, as it is vital to maintain and improve the collection and reporting of catch data. If the data reported do not reflect the actual removals, this will significantly impact the quality of scientific advice and may compromise the achievement of the sustainability objectives of the common fisheries policy (CFP). The Commission counts on the co-legislators to take this into account in the ongoing negotiations of the revision of the Control Regulation.

The Commission will use the important findings of this study in further discussions with scientists, the Member States, the Advisory Councils and the European Parliament and in the course of preparing the report on the functioning of the CFP by the end of 2022.

The study is also useful for all the stakeholders involved in the implementation of the landing obligation, such as the Member States and industry, as it shows a comprehensive analysis of the state of play and provides recommendations for improvement.