Seafood sector carbon footprint study

Project Outline:

Given the importance of this issue, it seems logical for BIM to divert time and resources. To this end, BIM has commissioned a study to look at the technical and operational efficiency of the current fleet. This study aims to build up a detailed profile of the different sectors and scenario test to see how the industry would cope with economic shocks, like the impacts of climate change and rising fuel prices. This project will also help to identify areas where funding should be targeting in the next EMFF. It is proposed to commission such a study could be commissioned early in 2020.

This study will be split into two parts. The first part would be to gather technical information on the CO2 emissions of fishing vessels across the different fleet segments currently operating. This would be based on measurement of the emissions from the main engine, any auxiliary engines and on-board processing equipment including refrigeration and freezers of a representative sample from each fleet segment. This analysis would concentrate on vessels over 12m which create most of the CO2 emissions associated with the fleet although measurements from typical inshore vessels less than 12m would also be taken. The results of these assessments would be scaled up to the entire fleet and would provide an indication of CO2 emissions by fleet segment, allowing comparison between segments. Where relevant it will use the information developed from the analysis of the operational and technical efficiency of the Irish fishing fleet described in Project 20/SFS/ESS003, completed in 2020.

The second part of the study, which would be carried out in parallel with the first part would review information from published reports looking at the emissions generated by similar fleet segments globally. The findings from this literature review would then be compared the results of the analysis from the first part of the study to provide a clearer picture of the impact of the Irish sector compared to other fisheries sectors. Depending on the findings, this potentially will facilitate the development of key communication points on the environmental credentials of the Irish fleet based on a suite of indicators that will be developed. The study will also carry out life cycle assessments to assess the environmental impacts associated with all the stages of seafood production and compared with other industries. This will focus on two case studies of key species for Ireland that will be decided on awarding of the study contract. A further output from the study will be the development of a predictive model that will allow predictions of CO2 emissions under a range of scenarios and assist in developing mitigation measures to reduce emissions.

Project Objectives:

The main objective of this study is to provide accurate baseline data on CO2 emissions of the Irish seafood sector. The study also aims to compare this baseline data with similar fleets globally. Based on the baseline information generated a suite of indicators that can be used to monitor emissions overtime will be developed. Life cycle assessments for two key species for Ireland will be completed to assess the environmental impacts associated with all the stages of seafood production. These will be compared with life cycle assessments for other food industries. The project also aims to develop a predictive model to assist and measuring the impacts of possible mitigation measures

Expected Benefits:

- Provide a detailed analysis of the carbon footprint of the catching and aquaculture sectors through Life Cycle Assessments based on case studies.
- Provide a comparison of the carbon footprint of seafood against other sectors.
- Develop a predictive model that will allow predictions of CO2 emissions under a range of scenarios and assist in developing mitigation measures to reduce emissions.

Projected Cost: €180,000