BIM EMFAF Work Programme Project Report 2022

BENEFICIARY: Bord Iascaigh Mhara
PROJECT REFERENCE NUMBER: 22/KGS/ESS-BG009-BR025
NAME OF PROJECT: Seafood Sector Carbon Footprint Study
IMPLEMENTATION PERIOD: 1st January to 31st December 2022

Project Scope

This project started in March 2021 with most of the research and results produced in 2022. Climate change is a key issue for the seafood sector and mitigating the negative impact of climate change is ultimately based upon a clear understanding of the societal and sectoral contribution to Green House Gas (GHG) emissions. An assessment of GHG emissions is often referred to as a Carbon Footprint (CF) and a lower CF is seen as a key indicator of sustainability. The priority for this project was to carry out a baseline study of greenhouse gas emissions for the Irish seafood sector and to document the project findings in a report. The study adopted a Life Cycle Assessment (LCA) approach to identify carbon emission hotspots across the seafood supply chain. The establishment of a carbon footprint baseline for the Irish seafood sector will allow the sectors carbon performance to be monitored in the future to measure performances trends and to plan for mitigation actions to reduce the CF of the industry.

Objectives

This project set out to estimate the carbon performance of the Irish seafood sector and to compare this performance to sea fisheries internationally and to other food production sectors such as farming. The project aimed to achieve this by using the Life Cycle Assessment (LCA) approach and conform to the Green House Gas Protocol and relevant ISO standards applicable to the estimation of carbon footprint. The project aimed to follow a project plan with distinct data acquisition, data analysis and reporting phases to deliver the findings of this study to industry in a user-friendly fashion. To this end, a communication plan has been developed.

Outcomes

A detailed project report has been written and dissemination of the project report findings took place in February 2023.

The key findings from the study include:

- This report provides a carbon emission baseline for the seafood sector and is seen as a starting point to achieving Net Zero by 2050.
- Total carbon emissions for the Irish seafood sector are 396,207 tonnes CO2 eq. This total figure covers both catch fisheries and aquaculture segments. This represents 1.76% of emissions when compared to Irish agriculture emissions (2017-2019 average).
- Overall, the Irish seafood sector is a relatively low carbon emitting sector i.e., the sector has a low carbon footprint. This is because of the small size of the sector relative to farming, energy production, transport

and other sectors of the economy, and also the fact that Irish seafood has a low carbon emission profile per tonne of landings.

- Irish seafood is found to be a 'low carbon food' when compared to other food groups such as beef and lamb, for example the carbon footprint of farmed blue mussel is 0.107 kg CO_2 eq./kg of harvest, compared to 11.75 kg CO_2 eq./kg for beef. A key reason for this is that fish and shellfish don't emit methane as part of their life cycle.
- The Irish seafood sector is diverse, and the carbon footprint of different seafood products varies depending on the species in question and the methods used to cultivate or catch these species.
- The drivers for decarbonising the Irish seafood sector will intensify in the future. The main drivers for emission reduction are (i) national obligations to achieve Net Zero emissions by 2050, (ii) maintaining ecosystem biodiversity and sustainability, (iii) consumer demand for low-carbon products, and (iv) increasing fuel costs.
- Data management is a cornerstone of monitoring and improving the carbon performance of the seafood sector. The ideal scenario is where detailed fuel, energy, landings, and production data are stored and managed in a standardised fashion across the seafood sector. This approach would cater for an evaluation of the sector's carbon performance trends over time. Ultimately, climate targets need to be set and achieved. Proof of successful target attainment can only be demonstrated using solid data.
- The seafood sector like other sectors in the economy is moving towards Net Zero emissions by 2050. To support this transition, further research and investigation will need to be conducted to understand the carbon footprint of the Irish seafood sector.

Summary of Project Spend

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Total Approved Costs	€40,000
Total Eligible Expenditure	€40,000
EMFAF Eligible Expenditure	€20,000
Exchequer	€20,000

Report by: Ben Dallaghan

Date: February 2023