BIM EMFAF Work Programme Project Report 2023

BENEFICIARY:	Bord Iascaigh Mhara
PROJECT REFERENCE NUMBER:	23/SPIS/DIS-BG011-BR066
NAME OF PROJECT:	**Assessment of the parasite *Kudoa thyrsites* in NEA Mackerel**
IMPLEMENTATION PERIOD:	1st January to 31st December 2023

Project Scope

This project seeks to build on international scientific studies that have been conducted on the parasite *Kudoa thyrsites*. It is important that a specific detailed baseline national study is conducted to establish the status of this parasite, development trends, and possibly mitigation measures relating to the Irish NEA mackerel fishery. Based on industry engagement, initial desk research of relevant scientific publications and engagement with research institutes it was agreed that the most effective approach to carrying out a comprehensive baseline is to resource a PhD study in collaboration with a third-level institute. ATU Galway and the Fish Health Unit of Marine Institute (MI) have been consulted and PhD proposal has been drafted. This PhD will run for four years. The project will include close engagement with pelagic processors in Killybegs, particularly those involved in value add processing (filleting and h&g production) on a year round basis, engagement with commercial pelagic fishers to ensure a wide range of onboard samples are accessible from the entire distribution of the fishery, and close engagement with MI port samplers to ensure samples are collected at the port that are closely linked to the ongoing collection of biological information (size, weight, age, sex, maturity) from the commercial landings. In addition, samples will also be requested from all relevant scientific surveys that will provide comprehensive coverage and additional scientific information from the surveys. In addition, the MI's Fish Health Unit can also provide additional scientific sample testing resources. It will also be important to link in with relevant research institutes e.g., IMR, Nofima, Sintef where relevant applied research on fish parasitology is being carried out to ensure up to date state of the art insights are sources and collaborations are developed.

Objectives

- To set up a collaborative industry focused PhD project with ATU Galway, MI and industry stakeholders.
- To set up a robust sampling programme in consultation with national and international experts and industry stakeholders.
- To carry out a robust baseline assessment with maximum coverage of the fishery using industry and MI resources and capabilities.
- Assessment to include:
  - Identification of the specific parasite and its life history traits.
  - Prevalence (proportion or percent of individuals in a population having a disease or characteristics).
  - Incidence (the number of new cases of a specific disease occurring during a certain period in a population).
  - Mean Intensity (average number of parasites per infected fish).
  - Mean abundance (average number of parasites in all animals -including uninfected fish).
  - Disease - impairment in the normal state of an organism that interrupts or modifies the performance of the vital functions and is typically evident by distinguishing signs and symptoms.

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union

- Map the distribution of parasites in relation to the fishery and biology (e.g., size, maturity, feeding, spawning).
- Identification of 'hot spots' and mitigation recommendations for industry.
- Development of effective sampling both detailed and rapid solutions.
- Engage with the sector to communicate progress of the study and co-produce best-fit mitigation measures (e.g., avoiding specific seasonal/location 'hot-spots', sampling and testing).
- The mitigation programme rolled out eight pelagic processors will have Kudoa sampling plan and associated mitigation measures included in their HACCP documents and implemented as part of their Food Safety Management Systems.
- Management of communication to the public.

Outcomes

The four-year study commenced in 2023. A PhD research plan was developed by ATU Galway, BIM and the Marine Institute, and a PhD student was selected. Linkages have been made with pelagic industry stakeholders (fishers, processors) to outline the scope of the project and promote the need for industry engagement to ensure the project deals with commercial concerns in terms of how to detect parasites, how to potentially avoid them and the collection of samples and insights. A network of scientists comprising pelagic samplers, national and international scientific peers (e.g., IMR, Nofima, Sintef) has been established to optimise sample collection and establish effective parasite assessment techniques and ensure all other fisheries relevant data are collected. In particular those carrying out similar research have been contacted to ensure a comprehensive research plan has been developed and is currently being executed. ATU Galway, BIM, MI and industry will continue to engage regularly over the lifetime of the project to ensure effective project delivery over the next three years.

Summary of Project Spend

Summary of Spend	
Total Approved Costs	€48,438
Total Eligible Expenditure	€48,438
EMFAF Eligible Expenditure	€24,219
Exchequer	€24,219

Project Partners: ATU Galway, Marine Institute

Report by: Michael Gallagher

Date: January 2024

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach
Co-Funded by the European Union