

**BENEFICIARY:** BORD IASCAIGH MHARA  
**PROJECT REFERENCE NUMBER:** 19/KGS/STS009.1  
**NAME OF PROJECT:** Benthic Mussel Program  
**IMPLEMENTATION PERIOD:** 1<sup>st</sup> JANUARY -31<sup>st</sup> DECEMBER 2019

### Project Scope

DAFM is currently undertaking a review of the Benthic Mussel Sector. As part of the discussions with DAFM, BIM and the MI in respect of this review, additional scientific work to that currently undertaken by BIM (Seed Mussel Survey and mussel larval monitoring) was needed. This includes potential brood stock biomass estimation, increased bivalve larval monitoring, genetics of stocks, seed survival and condition/spawning stage of both seed mussel stocks and mature stocks.

The new survey vessel the M.V. T. Burke II was used to locate and survey seed mussel beds on the East Coast, in Dingle Bay and other areas of Ireland. The vessel was also be used for work on bivalve larval monitoring and any other survey work as is required.

Additional scientific work was undertaken to assess biomass stocks of mature mussels along with bivalve larval monitoring work (that is additional to the Bluefish project). Mature and seed mussels were sampled from various locations to assess the condition and gonad indices. Work was undertaken in Castlemaine Harbour and Wexford Harbour on seed survival.

### Objectives

The main objectives of the benthic mussel program are to identify and quantify sustainable seed mussel beds around the coast of Ireland and facilitate the search for seed mussel beds for the industry.

It also provides sound scientific information and data to DAFM to assist with resource management. It does so by producing survey reports that are made directly available to the industry and DAFM via the BIM website once an area of interest has been covered. Those reports detail the location of the seed mussel settlements, their estimated biomass, the nature of the seabed, the quality of the seed mussel. The survey information obtained is then used to determine if the beds are suitable for fishing or whether they should be closed for a certain period.

The objective of the larvae monitoring is to give stakeholders a better understanding of the subtidal mussel life cycle.

Both larvae and broodstock samples are collected on a weekly basis by industry members or local inshore fishers. Larvae samples are sent to a laboratory for processing. The analysis provides details on larvae concentration and larvae age class for each sample.

Linking possible spawning events observed during broodstock monitoring with larvae occurrence at sampling location can indicate travelling pattern. To assess those possible patterns, BIM has acquired a fleet of GPS tracking drifter buoys that are deployed at strategic location and in correlation with possible spawning events.

## **Budget**

Maximum approved expenditure on the project totaled €291,000 corresponding to the following headings:

- Associated survey running costs of M.V. T. Burke such as fuel and berthing fees etc.
- Contractors to supply skipper and additional survey officer (outsourced).
- PCR screening of bivalve and zooplankton larvae (outsourced).
- Additional larval sampling and boat hire (outsourced).

## **Achievements / Spend**

- 50 days was spent at sea searching and assessing seed mussel beds.
- 5 settlements were found: three on the east Wexford coast, one in south Wicklow and one in Castlemaine Harbour, all representing around 7,800 tonnes of seed mussel at the time of the surveys.
- The seed mussel fishery was therefore successfully open in mid-September on the east coast and early October in Castlemaine Harbour.
- 144 larvae samples were collected and analyzed during the monitoring period.
- 4 GPS trackers were deployed along the east coast during the survey season.
- All reports are available online at the following address: <http://www.bim.ie/our-publications/aquaculture/>

## SUMMARY OF SPEND:

The 2019 underspend mainly corresponds to survey limitations due to the timing for the launch of the new survey vessel and days of adverse weather conditions for surveying. In addition, the subcontracted marine biologist departed unexpectedly in September 2019.

Total Approved	
<b>Total Eligible Expenditure</b>	€291,000.00
<b>Total Drawdown</b>	€277,151.76
<b>EU – 50%</b>	€138,575.88
<b>Exchequer – 50%</b>	€138,575.88

Report: Nicolas Chopin

Date: May 2020

