

Subtidal Seed Mussel Stock Survey around the Coast of Ireland



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Scotland

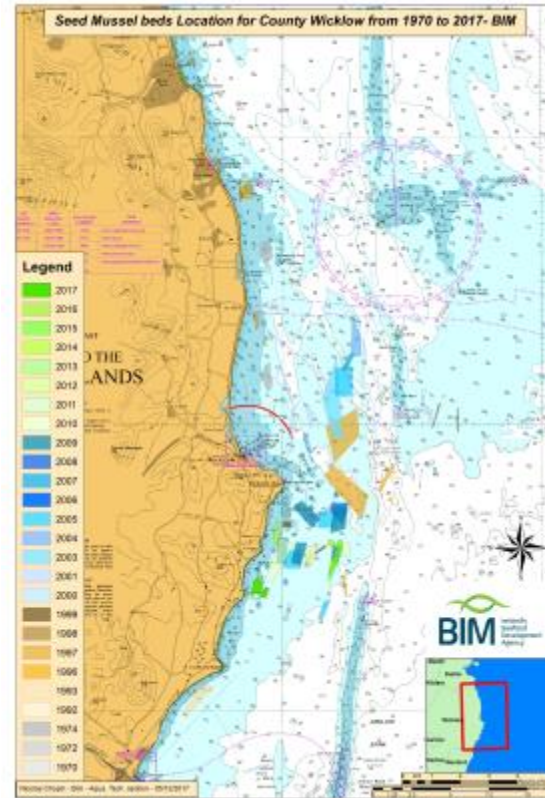


*“In 2017, the Irish seabed grown mussel sector was valued at €9.2 million **but the sector continues to depend almost exclusively on the extent of annual wild seed settlement.**” (BIM -2018)*

Subtidal Seed Mussel Stock Survey around the Coast of Ireland

- **1970:** the start
- **2008:** arrival of the inshore survey boat T.Burke
- **2010:** First use of the side scan sonar
- **2011:** Use of Day grab and mapping software for settlement assessment
- **2015:** Larvae Monitoring
- **2018:** deployment of GPS Drifters

➔ *Better assessment of the resource to help management*



Survey Methods



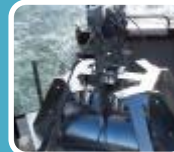
Side scan Sonar Survey

- Acoustic image 200 m wide
- Target acquisition
- Directly process on board



Dredging

- 1 m dredge
- Sampling
- Best way to assess what really on the ground



Grab

- 0.1 m²
- Following Side scan sonar image
- best way to find density for biomass estimation



Mapping

- Visual of all the data collected
- Measure of bed extent and biomass
- Coordinates



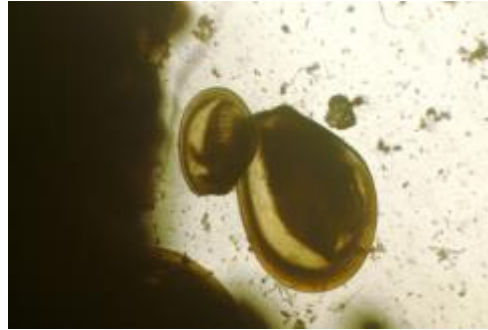
Rusk Channel Seed Mussel Bed

Other surveys

Recruitment passed from over 20,000 t in 2010 to little over 3,500 in 2013.

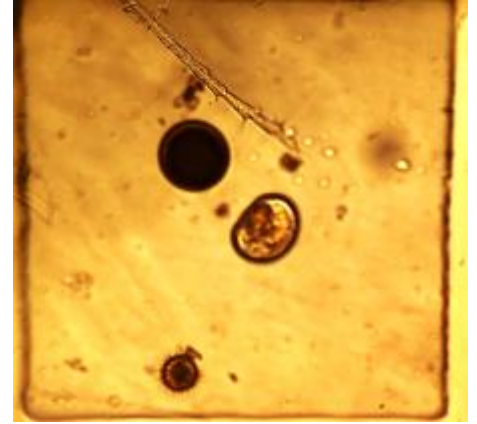
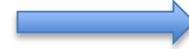
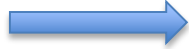
Investigate the problem:

- Larvae : how many and where are they going?
- Husbandry: meat yield variation?
Wild population?



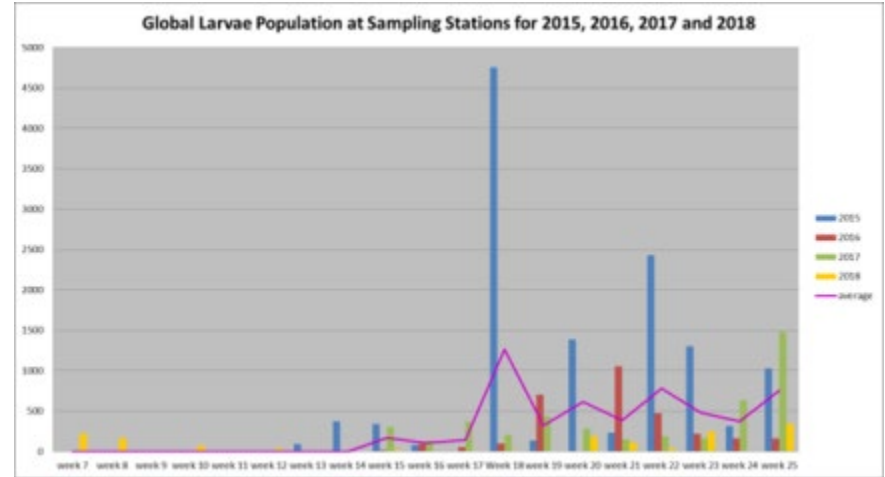
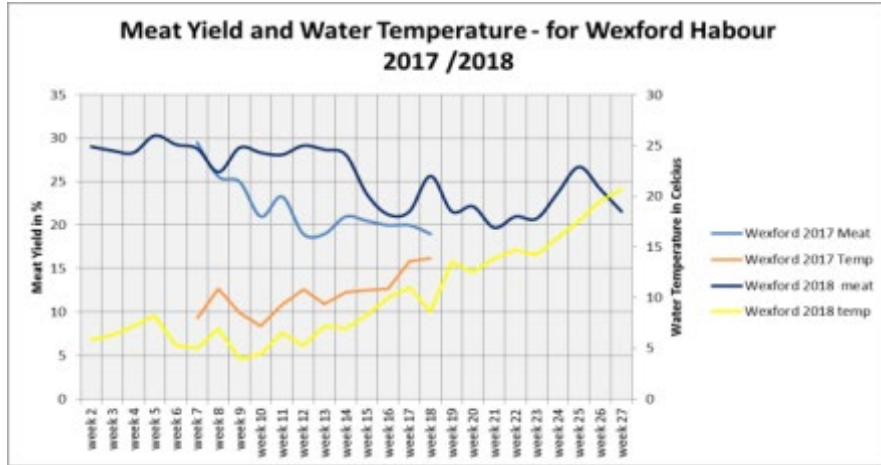
Larvae and meat yield monitoring

Larvae monitoring



In addition Temperature, salinity, tide strength and direction and weather conditions are collected by local fishermen

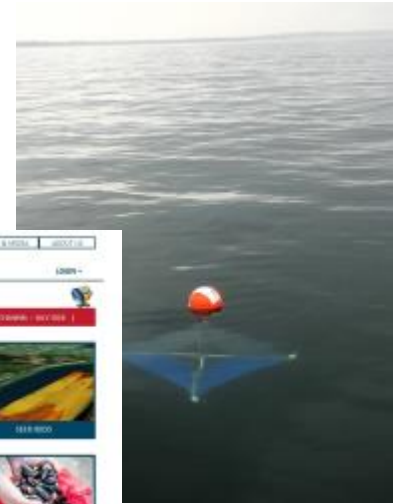
Larvae monitoring



So far, we found relation between the amount of larvae and the seed mussel areas but no relation with tonnage (seed quality variation).

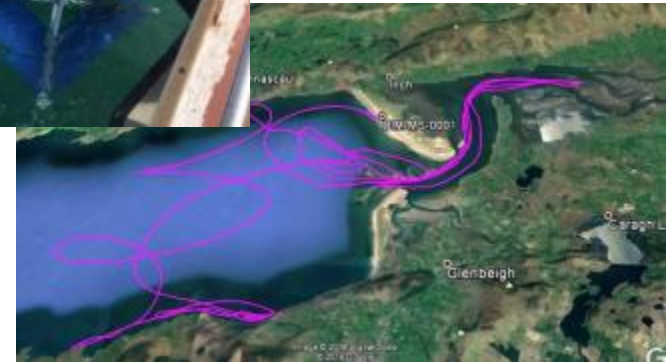
ISPP Project

- INTERREG Project between BIM and Bangor University.
- Creation of one-stop-shop Portal for industry.
- Additional experiment such as larvae tracking with GPS drogue, collection rope trails and seed transplant from rope to seabed.
- Outreach program for kids.



Drogues Releases

- No release in 2017 but 5 releases in 2018 on the Irish Coast (3 on the southeast coast, 2 in Castlemaine Harbour)
- Try to indicate travelling direction of the larvae
- Constant monitoring (location recorded and transmitted every 10 min)
- More difficult on the southeast coast (recovery)
- Very surprising track with very interesting results
- The more the better
- More releases planned for other projects



Castlemaine Launch 1 (15/0518 to 17/05/18)

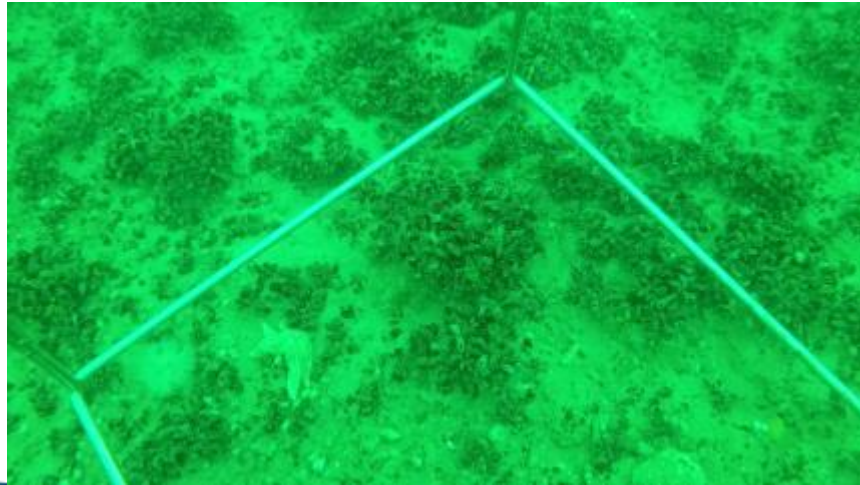


Retrieval of Drogue 1



What's next

- BLUEFISH Project
- Continuation of the monitoring programs
- New Vessel
- More drogue release
- Species variations





For more information: <http://ispp.ie/> or <http://www.bim.ie/>



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