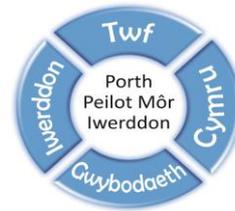




Teacher's Notes



Background

- Ireland and Wales share the Irish Sea and it is a vital resource for both.
- The Irish Sea provides a range of goods and services including the creation of blue energy, fishing, recreation, aggregate extraction, mineral exploration, the location of undersea cables and the transport of people and goods.
- The ongoing use of the Irish Sea as a resource and service provider is dependent on human activity and careful management.

The Project

The Irish Sea Portal Pilot (ISPP) is a territorial co-operation project between an Ireland and Wales for the Irish and Celtic Seas. The project focuses on cross border collaboration between research and small-medium sized enterprises (SMEs).

- The ISPP is a joint project between Bangor University (BU) and Bord Iascaigh Mhara (BIM) with BU as the lead partners.
- The objective of the pilot is to “Increase the intensity of knowledge transfer collaborations involving research organisations and SMEs in line with the shared priorities of the smart specialisation strategies.”
- The pilot is aiming to test the feasibility of a larger Irish Sea Portal and ultimately to meet the demand for easily accessible data across the Irish Sea sector.
- The pilot (ISPP) is focuses solely on the Bottom grown (BG) or benthic mussel aquaculture sector.

For more information please see our **Website:** ispp.ie & **Twitter:** @ISPP_EU

Bottom Grown Mussel industry information

- BG mussel aquaculture is an important seafood industry in both Ireland and Wales.
- The technique for BG mussels has several steps:
 1. Young mussels (juveniles) are small (microscopic), live and drift in the water column (planktonic).
 2. Juveniles settle onto the seabed (benthos) in a process called spatfall.
 3. In the summer, juvenile mussels (spat) are collected from the wild.

4. Usually, when the mussels are big enough (up to and a bit above 10mm) they are called seed. In one day seed is pulled (dredged) or raked up, moved and laid over licensed sheltered areas to grow.
5. After 18-24 months the mussels are now big enough to be sold (market size). Mussels are located, dredged/raked up and packaged.
6. The mussels are now sold to local and global markets, which are mainly the Netherlands, Belgium and France.

Notes on the process:

- 3. The collection of wild juveniles is a key step for the mussel industry. The juveniles largely come from wild mussel beds spawning. However, the location and timing of seed beds varies year to year. Factors including weather, the time and location of the spawning event, tide, major currents and water temperature affect a seed bed's location and timing.
- Finding where and when the juveniles settle is vital to the industry. Local knowledge of historical seed locations and surveying are key. In Ireland, BIM conduct seed surveys every year to assist the mussel industry. Additional tools include mathematical models, sampling by fishermen and diver surveys.
- 4. The movement of mussel seed is needed. The survival of wild mussel seed is very low. Predation, winter storms and unsuitable spatfall locations means that the majority of seed will not grow to market size in the wild.
- The transport of seed to growing sites gives fisherman greater control over the location and timing of harvest as well as excluding the public from fishing the area.

The Book

- The activity book is in colour, illustrated by John Joyce, 31 pages long and contains activities around, information on and recipes for BG mussels.
- Activities in the book include, a maze, word search, spot the difference, join the dots and a recipe.
- Presentation of book will be by a BU/BIM employee.
- There will also be information on the biology of mussels and fun facts e.g. Mussels can live to 50 years if not eaten by you or another predator!

