

Aquaculture Remote Classroom (ARC)

Project Outline:

The Aquaculture Remote Classroom (ARC) is a mobile classroom which has been procured on a hire basis by BIM via an appropriate tender. The Farmed in the EU (ARC) project is operated, supported and managed by a private sector service provider which has been procured via an OJEU tender process. The classroom is staffed by two highly competent and enthusiastic tutors with advanced and relevant academic specialisations in Marine Biology and Sport and Nutrition, they are supported by a Driver/Mechanic who accompanies them on deployment.

Project Objectives:

The ARC has been designed to travel throughout Ireland and accommodate up to thirty young learners at a time and provide one full day of an interactive learning experience. The learning experience is focused on positively engaging young people about aquaculture and related topics with the express objective of fostering knowledge and understanding of aquaculture and how it relates to learners and their community. The content addresses strand of SESE Science, SESE Geography and SPHE Education curriculum as set down by the Department of Education and Skills, this ensures that the learning day contributes to knowledge of aquaculture while meeting some other requirements that have been set down by the Department of Education.

The programme has been planned with a target of delivering to approximately twenty-five learners per day for the bulk of the primary school year, the project operates to a target of no less than thirteen teaching days per month for the school year, but with the expectation that operational performance above this level in normal circumstances. It should be noted that there is a need to allow for travel between schools, set-up times, vehicle reconfiguration and occasional cancellations by schools, therefore twenty day per month deployments would be considered very ambitious.

A mobile classroom is absolutely necessary for the delivery of the project because many Irish primary schools operate at or close to capacity in terms of space and may not be able to facilitate activities like those provided by the ARC, therefore this project must provide the space by way of the mobile classroom, this ensures that no schools are disadvantaged, and that participation can be as widespread as possible. The successful delivery of any learning content is most effective where there are no more than thirty pupils in a single group being supported by two tutors. These factors have contributed to the design of the project in terms of the scale of engagement that is realistic and manageable in terms of logistics and costs.

There is also significant variation in the quality of technologies and resources that are available to schools, therefore, to enable effective and timely delivery, the mobile classroom must be fully equipped with all necessary learning tools, seating, tables, audio visual and computer equipment as relying on schools to provide these would be impractical and set up times would reduce the amount of time that could be utilised for learning activities. The mobile classroom has been developed with a view to providing all necessary space, learning tools and technologies for young learners while ensuring that each young participant has adequate opportunities for one-to-one interaction with the tutors.

The ARC visits schools on the basis of 'Expressions of Interest' submitted via the project website hosted on www.bim.ie. Operations are scheduled in a manner that seeks to minimise travel and specific areas that demonstrate high demand are timetabled to maximise impact and reduce cost.

The first year of the project was extremely successful with all school visits received extremely well and demand exceeding delivery capability. A total of nearly 5,000 visitors boarded the ARC in 2019. In

2020 due to the closure of schools in March due to the COVID-19 pandemic, the delivery of the ARC programme was moved to an online format.

During 2021 the four specially made online videos were updated and amended to provide a better online experience from students based on feedback. The subject of the four videos were:

- What is Aquaculture?
- The Nutrition of Seafood
- Aquaculture and the Community
- Sustainable Irish Seafood

The content briefly covers the history of farming and food production before introducing aquaculture as a farming process, the content places aquaculture in a European and in an Irish context and frames the evolution of the practice over time and the emergence of the modern Irish aquaculture industry. The content also introduces the food pyramid, discusses healthy eating and sustainability. The content is described briefly below.

The content is tailored to 5th and 6th class pupils in terms of scope, depth and complexity. Supporting materials such as posters and project idea leaflets were also distributed. BIM proposes to encourage ongoing learning and interest in aquaculture by encouraging participant schools to complete follow up activities as per the *Farmed in the EU* guidelines and to submit these into a competition managed by the implementing organisation.

The programme requires the following resources for effective implementation.

- A suitable provider to effectively deliver the project 'on-the-ground' to schools. The provider is expected to carry out all project management activities, receiving and managing requests from schools, scheduling operational activities, liaising with schools, conducting all activities required for day-to-day delivery of learning outcomes to pupils. Further activities like content development, managing the competition and follow up activities with schools will also be necessary.
- A mobile classroom of appropriate size and capability, fully equipped with all necessary seating, tables, learning tools, computers and audio-visual equipment. (Hire costs and operational costs like fuel, tolls, parking).
- Production of additional learning materials/technologies and course content for schools and for public engagement events.

An external evaluation of the programme was undertaken in June 2021 with feedback from teachers whose classes participated in workshops and webinars; interviews with the facilitators involved in delivery of the programme; service providers involved in development of content and management of the programme and stakeholders in the wider marine sector. The report found that that ARC schools visits and webinars have been very well received and teachers that provided feedback indicated that the experience impacted positively on both their own and their students' interest and understanding of aquaculture. Recommendations include:

- Devising an ARC programme strategy that sets out the programme mission, vision, objectives and targets in terms of reach, target audiences, evaluation metrics and stakeholder engagement.
- Convening a facilitated programme planning session with BIM and the ARC facilitators to explore suggestions received in terms of programme content, staffing, administration, and potential development for new audiences.

- Learn from international best practice in terms of education and public engagement with aquaculture in other countries and to showcase the ARC to stakeholders in the wider marine and education sectors to raise awareness of the programme and leverage collaboration and support.

Expected Benefits:

- Knowledge and understanding of aquaculture and its benefit to communities will be greatly increased amongst young learners throughout Ireland by virtue of a significant number of learning days being held at schools during 2022.
- The programme will introduce aquaculture to many Irish schools for the first time, the learning days will serve the target audience and the provision of additional materials for follow up activities will stimulate continued learning about, and interest in the sector amongst pupils. A facilitated programme planning session with BIM and the ARC facilitators will continue to evolve and develop programme content.
- Public awareness about aquaculture and its benefits will be increased through schools-based activities and public outreach efforts and through online learning.
- Public awareness of specific regional aquaculture activities will be increased in aquaculture production areas through schools' activities and public outreach initiatives, this will contribute to better public understanding and acceptance of aquaculture activities.
- The project will unlock the potential of running more coordinated, more cooperative implementation efforts within the Farmed in the EU initiative across a number of EU member states. The project team will liaise with other implementation teams from other EU member states to learn from international best practice in terms of education and public engagement with aquaculture and to showcase the ARC to stakeholders in the wider marine and education sectors to raise awareness of the programme and leverage collaboration and support.
- In 2022 it is envisaged that school visits will commence as soon as Government regulations allow. A new leased vehicle has been procured in 2021 and will be leased throughout 2022. In addition to this spend, there is a requirement to improve and move learning materials to make them more conducive with online learning. Requests have also been made by schools to expand the programme to transition year pupils and materials to deliver an effective programme has been developed in 2021 and will be deployed in 2022.

Projected Cost: €350,000