

<b>Request</b>	<b>Response</b>
<p>1. Margin of error for the SMILE model used for the new aquaculture sites proposal in Mill Bay.</p>	<p>There is no agreed industry standards for the validation and calibration of ecosystem models such as SMILE (ECOWIN) which are multi parameter ecosystem models. However, extensive calibration and validation tests are undertaken – see the paper attached as Annex B.</p>
<p>2. What was the brief given by DAERA to AFBI for the reports done in relation to the new aquaculture sites proposal in Mill Bay? Please include all paperwork/emails/notes/recordings etc.</p>	<p>Production of HRAs, the Environmental Impact Assessment of Aquaculture and SMILE modelling are part of an annual work programme (AWP) agreed with DAERA (previously DARD) and are frequently discussed throughout the financial year.</p> <p>The relevant text from the most recent summary of AWP aquaculture lines is excerpted below:</p> <p><b>FISS15 DD-SEAFISH FAE 42098 Environmental Assessment of Aquaculture activities.</b>  Article 6 Habitats Regulations Assessments (HRAs) and ASSI Assessments and shellfish management.</p> <p><b>Deliverables:</b>  Produce assessments of the impact of aquaculture and sea fisheries operations. Continue to undertake the programme of management put in place in previous years to ensure that aquaculture activities are monitored against the recommendations arising from the HRA programme.</p> <p>Update Cumulative Impact assessments of aquaculture activities, within Carlingford and Belfast, in line with new models developed through external funding.</p>

3. What mortality rate was used for the SMILE model run for the new aquaculture sites proposal in Mill Bay.	1% natural mortality used in the model for pacific oyster.
4. How are seed inputs used in the SMILE model which was used for the new aquaculture sites proposal in Mill Bay?	Seed inputs are calculated using DAERA supplied Import and Export data, seed input to the model is calculated per aquaculture site and is input as ton TFW ha-1. Data used in the model for Mill Bay Cumulative Impact Assessment: NI oyster data based on 2017-2021 DAERA recorded inputs. A 5-year mean calculated per site, model simulates oyster growth accounting for juveniles, half-grown and adults up to harvestable size on each site. ROI oysters used a default 5-year mean based on data provided by Marine Institute. Total tonnes per year divided by 89h (area used for oyster aquaculture cultivation).
5. What harvest weight is used for oysters in the SMILE model which was used for the new aquaculture sites proposal in Mill Bay.	60g lower harvest limit
6. Were any future proofing measures taken while running the SMILE model, used for the new aquaculture sites proposal in Mill Bay to ensure sustainability of existing businesses and wild bivalve populations in the coming years.	DAERA and AFBI have commitments in the shared work programme to continuously update and maintain the source data from the Ecosystem Models supported other UK, NI and ROI agencies. Including long term environmental change
7. Can the SMILE model used for the new aquaculture sites proposal in Mill Bay allow for the condition of bivalves, and can assurances be given that existing businesses will not be negatively affected in their ability to produce "Special" grade oysters or that growth rates will not be slowed down.	<p>The SMILE model can be used for the new aquaculture sites proposal in Mill Bay allow for the condition of bivalves.</p> <p>While the model can reliably predict the impact that changes in culture activity and environmental factors will have on production, and can inform the choice of management options, the application of these options in specific circumstances will remain a policy decision.</p>
8. Is there the same amount of available feed for bivalves both wild and cultured after the box containing the	This would require further model runs as this was not an option run for the consultation.

proposals has been manipulated in the SMILE model, used for the new aquaculture sites proposal in Mill Bay?	
9. A copy of the full application to conduct experiments on mussels in Mill Bay.	AFBI have spat collectors offshore of Mill Bay (Killowen) covered by both Section 14 and HRA
10. All paperwork/notes/data and any other information from the experiments on mussels in Mill Bay.	Attached as Annexes C and D.
11. A copy of the Section 13 [requester later amended to Section 14] obtained for the experiments on mussels in Mill Bay.	Fulfilled by HRA – For clarity AFBI with the agreement with a one of the local license holders placed a small amount (ten bags) of local mussel seed on trestles – in August 2023 this site has been identified by DAERA as requiring a section 14 – draft attached as Annex E.
12. A copy of the assessment for Killowen Shellfish to access their site via the access lane other than Ballyedmund (as described in the AFBI report for consultation), DAERA claim to hold no such assessment.	Access through the access lane is not considered under the HRA although it is noted. However, there is discussion on internal access routes through the sites.
13. What is AFBI's understanding of the precautionary principle?	<p>AFBI As body does not have a policy on this as it is not a regulatory agency and will follow DAERA and UK Government Policy where applicable.</p> <p>The UK government is a signatory to the 1992 Rio Declaration. Its definition of the precautionary principle states that 'where there are threats of serious or irreversible environmental damage, a lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'.</p> <p>When to use the precautionary principle: The precautionary principle is applicable where there is plausible evidence of a risk</p>

	<p>that a particular policy could cause serious or irreversible damage to the environment, alongside a lack of scientific certainty about the likelihood or severity of this damage. The precautionary principle supports policymakers in their management of that risk.</p>
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