



## **Kati Michalek - Early Stage Researcher No.3**

### **Levels of calcification and selection in naturally varying pH habitats in farmed vs wild species**

Generally speaking, my work focuses on the response of Blue mussels to changing climate conditions. Here in Scotland, the cultivation of Blue mussels is of high economic importance, providing an increasing source of food and promoting local employment opportunities. However, in times of climate change, with more frequent environmental extremes, it is crucial to understand how this species reacts and adapts to varying habitat conditions and how these could impact the mussels' overall condition.

The majority of Scottish blue mussels are cultivated in sea lochs, which are subject to varying degrees of surface water salinities, temperatures and pH values, mostly due to different levels of freshwater input to the loch. These varying conditions allow us to study climate change impacts on Blue mussels in a natural experimental system. We will monitor environmental parameters on-site of numerous mussel farms, collect mussels from farmed as well as wild populations and investigate their adaptation potential by applying a variety of ecological and molecular approaches.

With the help and in close cooperation with Scottish mussel farmers, the generated data will show habitat-specific environmental impacts on mussel populations. The results will be of high relevance not only for aquaculture research but especially for local farmers to quantify their product quality in times of a changing climate.

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