

## **HARVEST-INDUCED EVOLUTIONARY CHANGE IN PACIFIC OYSTERS?**

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Since its introduction 30 years ago, farmed Pacific oysters (*Crassostrea gigas*) represent an important financial contribution to many coastal communities in France. Although the stocks have been able to sustain high exploitation levels, life-history theory predicts that such strong selective pressure may lead to adaptive changes in life-history traits. The aim of this study is to disentangle the effect of environmental factors, local adaptation and size-selective harvesting on somatic growth and reproductive investment in this species.

We implement a modelling approach that couples an individual-based growth model within the Dynamic Energy Budget framework with population dynamics via density dependent growth and reproduction. We use environmental and individual growth data from the Marennes-Oléron oyster stock to calibrate the model and we model food resource feedback explicitly. Finally, we implement evolutionary dynamics by allowing for genetically varying cohorts and quantitative genetic inheritance.