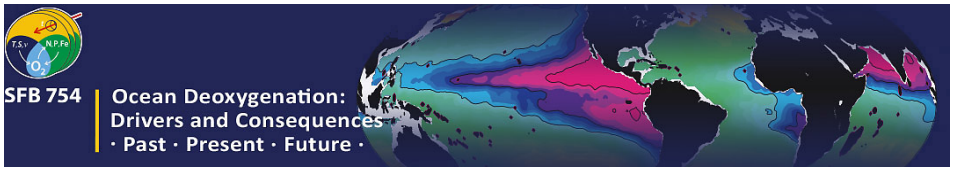

Contribution ID : **178** Type : **Poster**

Understanding controls on oxygen deficits in UK waters using a community ecosystem model and isotope tools

Oxygen (O2) is essential for complex marine life, including commercially important species of fish and shell fish. Ongoing assessments have identified significant downward trends in O2 concentrations in the Northern and Southern North Sea and English Channel. However, the same assessments also identified significant gaps in the data and monitoring practices, as well as lack of understanding of how the interactions between physical, biological and climatological processes control O2 concentrations. During a new project, we aim narrow these gaps in understanding using a combination of i) new and existing observational datasets; ii) model data generated by the European Regional Seas Ecosystem Model (ERSEM) and iii) a novel combination of oxygen isotope data and model simulations. The work will be split into two phases: Phase 1): Identification of the mechanisms affecting O2 deficiency using the model and observational data; and Phase 2): Investigating the use of oxygen isotopes to help better understand oxygen cycling and the relative contribution of different biological populations to O2 production and consumption. Here, we will present an overview of the project and planned future work.

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Are you a SFB 754 / Future Ocean member?

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Track Classification : 01 Prediction and Monitoring