



SOLAS science and why it is important

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There is increasing momentum behind the Surface Ocean – Lower Atmosphere Study (SOLAS), evidenced by a growing number of regional, national and individual projects all contributing to achieving its goals.

In this presentation some important items of the SOLAS scientific agenda will be presented and the rationale behind them explained. The CO₂ system and its role both as a cause and feedback to climate change will be elaborated, whilst acknowledging that the role of other gases in climatic and other global change is poorly known and needs attention.

The international scientific approaches needed to constrain net annual ocean-atmosphere CO₂ flux at the scale of an ocean basin to <0.2 Pg C yr⁻¹ will be described, and the vulnerability of the system to perturbation, the magnitude of the feedback, and its longevity will be explored, using results from recent mesocosm experiments. The SOLAS IMBER Joint Implementation Plan covers these and other related issues.