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Death in the sea - Mortality in the zooplankton and early-life stages of marine fish (estimates, processes and outcomes)

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With the development of new laboratory and field observational techniques, and the advance of modelling methodology, it is time to review approaches for estimating, simulating, and improving our understanding of the processes that control mortality. Mortality is difficult to quantify in the field (e.g. teasing apart “true” mortality from advection/diffusion effects). In addition, little is known about the relative importance of individual processes (e.g., disease, parasitism, starvation, predation, density-dependence) and how they contribute to overall survival at the end of the larval/early juvenile period. This theme session will survey methods for 1) estimating mortality in the field, 2) understanding underlying processes, and 3) constructing process-based forecasting tools that quantitatively link adult biomass/egg production with post-juvenile stages. We invite contributions from laboratory and mesocosm experimental research, field studies, modelling work, and synthetic approaches that elucidate, estimate, and forecast mortality of marine fish early life (including juvenile stages) and lower trophic levels (zooplankton).

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