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Shifting baselines revisited: Exploring pre-industrial climate and human impacts on marine ecosystems (Q-MARE, 2022–2025)

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Marine ecosystems are deteriorating worldwide, but scientific monitoring postdates the industrial revolution, leading to a distorted image of the pristine state of the world's oceans. The Q-MARE working group of PAGES brings together scientists from vastly different disciplines, historians, archaeologists, paleontologists and ecologists to explore pre-industrial baselines and understand the true magnitude and rate of change induced by modern anthropogenic activities, including climate change, specifically biodiversity loss and the sustainability of ecosystems and societies. How did climate and human activities affect marine ecosystems in the pre-industrial Holocene and the Pleistocene? When did humans start having a significant impact on the marine environment? How can data from different sources be combined to inform environmental conservation targets and model marine ecosystems? Through our activities, we aim to determine the state and gaps of knowledge around these questions, but also to inform policy-makers and the public.