



Multiple Pressure Exposure and Mitigation Potential of European Seas under the Climate Hazard

European Seas are exposed to a variety of pressures that threaten marine life and the services it provides. While the stress of these pressures on the marine ecosystem is widely acknowledged, its quantification at system level is complicated by the interconnections of species within each habitat and the dependence of the absolute thresholds of individual species on the environmental conditions they have been exposed to over their life history and previous generations. Here we propose a generalised approach to measure the exposure to pressures under different mitigation pathways relating the long-term changes in pressure indicators for acidification, warming and deoxygenation to the local internal variability of the ecosystem and thereby assuming that local ecosystems are sufficiently adapted and acclimated to the reference conditions they are exposed to. However, these pressures are subject to substantial heterogeneity, particularly towards the coast, so that the widely available global datasets from the CMIP

Momme Butenschön, CMCC Foundation - Euro-Mediterranean Center on Climate Change, Italy, momme.butenschon@cmcc.it. Trond Kristiansen, Farallon Institute, USA..