

POLAR OCEAN ECOSYSTEMS AND CHANGING CLIMATE

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Climate change signals in the Arctic became very obvious in the previous decades. The IPCC assessment report published in February 2007 reports on retreating sea ice cover in the central Arctic. We present data from long-term ocean climate and ecosystem studies performed in the Arctic, that marine ecosystems do respond to such changes in terms of shifts in species composition and changes in relevant biogeochemical processes. We complement our results with findings from the Antarctic and show how pelagic key species (i.e. Antarctic krill, salps, phytoplankton) react on environmental changes. A synthesis will be provided how ocean management may provide tools for climate mitigation strategies.