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Detection of environmental changes - satellite remote sensing in the Arctic region.

Monitoring changes in the marine environment is one of the most critical issues of contemporary oceanology. Due to global warming, the European Arctic is one of the most changing marine ecosystems in the world. The use of satellite data has revolutionized our ability to study the Arctic. Biogeochemical models based on satellite data have become an increasingly important tool for detecting, monitoring, mapping, and understanding environmental changes in this region, also providing environmental background for in-situ research. A comprehensive effort to incorporate many components and monitoring time series of sea ice retreat, and tidal glaciers (de-icing), associated with increased advection of Atlantic waters, chlorophyll a concentration, and rising sea surface temperature give the possibility to verify the actual consequences of global warming in the Arctic region.