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➤ **Gdynia Aquarium of the Sea Fisheries Institute, Gdynia, Poland:**

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*Arctic and Nordic Seas*

The Norwegian, Greenland and Barents seas form the European Arctic. This area is of key importance for the climate forming, not only for Europe, but also globally.

That is due to the difference between relatively warm sea water and cold air. This causes an intensive escape of heat from the Ocean to the Atmosphere. Cooled water gets heavier and sinks down, stirring the global circulation, that brings oxygenated water to the world ocean depths. Distant arm of Gulf Stream, carrying warm Atlantic waters flows into the Arctic as the West Spitsbergen Current. On the other hand, the sea area covered with ice pack shrinks rapidly. At the ice pack edge, and in areas, where cold and warmer water is mixing, ocean productivity is elevated. The most numerous seabird and sea mammals populations are linked to the Nordic seas – one of the reasons for this, is presence of large, fatty plankton, typical to low temperature regime. Warmer water means faster growth of plankton, smaller individual size and less fat deposited. Change in climate, means not only the change in physical properties of the Nordic Seas – it means the change of ecosystem functioning. Climate, biogeochemical cycles, hydrology and marine organisms are closely coupled in European Nordic seas.