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## Impact of large-scale atmospheric circulation changes over the North Atlantic on the wind climate of the Baltic Sea area for the period 1948/49-2018/19

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A detailed assessment of climate variability of the Baltic Sea area for the period 1958-2008 (Lehmann et al. 2011) revealed that changes in the warming trend since the mid-1980s, were associated with changes in the large-scale atmospheric circulation over the North Atlantic. The analysis of winter sea level pressure (SLP) data highlighted considerable changes in intensification and location of storm tracks, in parallel with the eastward shift of the North Atlantic Oscillation (NAO) centres of action. Additionally, a seasonal shift of strong wind events from autumn to winter and early spring exists for the Baltic area. Lehmann et al. (2002) showed that different atmospheric circulation regimes force different circulation patterns in the Baltic Sea. Furthermore, as atmospheric circulation, to a large extent, controls patterns of water circulation and biophysical aspects relevant for biological production, such as the vertical distribution of temperature and salinity, alterations in weather regimes may severely impact the trophic structure and functioning of marine food webs (Hinrichsen et al. 2007). To understand the processes linking changes in the marine environment and climate variability, it is essential to investigate all components of the climate system which of course include also the large-scale atmospheric circulation. Now, since extended time series data (1948-2018) for additional 20 years are available, it is interesting to investigate recent changes/shifts of the large-scale atmospheric conditions and their impact on the wind climate over the Baltic Sea area.