Comparison of the December 2013 storm surge with long-term severe storm events at the Pomeranian Bay coast (the southern Baltic Sea) Halina Kowalewska-Kalkowska and Roman Marks Institute of Marine and Coastal Sciences, University of Szczecin, Poland e-mail: halkalk@univ.szczecin.pl





The December 6-8, 2013 storm surge at the Pomeranian Bay coast was induced by the 30 hPa drop in atmospheric pressure and strong north-westerly wind (up to 29 m s⁻¹) during the eastward fast passage of deep depression over the Baltic Sea.

Comparison of the December 6-8, 2013 storm surge with all severe storm events recorded in the period of 1993-2013 allowed to classify it as the one with the fastest hourly sea level increase as well as the highest sea level rise amplitude.

The relatively high, but short-lasting storm surge in the Pomeranian Bay caused a moderate backflow in the Odra River mouth. The impact of the storm surge in the Szczecin Lagoon and in the lower Odra channels was visible up to Widuchowa.