



## **Sea Level Rise and Variability at the Swinoujscie Tide Gauge (1817-2007)**

M. Sztobryn (1) and W. Stepko (2)

(1) (marzenna.sztobryn@imgw.pl), Institute of Meteorology and Water Management (IMGW) – Maritime Branch, Gdynia, Poland, (2) (waldemar.stepko@imgw.pl), Institute of Meteorology and Water Management (IMGW) – Maritime Branch, Gdynia, Poland

Swinoujscie tide gauge is located in the westernmost part of the Polish coast– Southern Baltic Sea (tideless and semi-closed sea). Sea level observations have been performed at Swinoujscie since 1811.. The changes of mean sea level were analyzed on the basis of the observation series and compared with climate indices as winter NAO from (correlation = 0,34), NEWO (0,46), mean sea level of Stockholm (-0,58), and mean sea level of Kronstadt (0,7). Changes of mean sea-level show a steady, gradual increase of this parameter, beginning with the fifties of the XX century. Three intervals of mean sea level were analyzed low; normal and high zone. Characteristic is a rapid increase of number of annual mean sea level belong to the high level interval beginning from the thirties of the last century as well as practically lack of mean sea level values from low sea level interval during last forty years. Work was done under the projects SEAMAN and KLIMAT.