



Impact of anthropogenic activity on shoreline dynamics at the South Eastern Baltic Sea coast

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Understanding coastal change over the time is extremely important since it have significant economic and social impacts on coastal population or even threatens human interests by reducing the recreational area and limiting the development of the coast. Shoreline position measurements for various time periods can be used to derive quantitative estimates of the rate of shoreline change (erosion or accretion). These rates can be used to further our understanding of the magnitude and timing of shoreline changes in a geologic or socio-economical context. In this work will be analyzed shoreline position changes before and after port of Klaipeda reconstruction in 2002. We take positions of historical shorelines from various sources (aerial photos, orthophotos, topographic maps and field works) and then overlay them to produce historical shoreline maps for the 1980-2018 time period. The rates of shoreline changes have been assessed by using Digital Shoreline Analysis System (DSAS), an extension of ArcGIS. Changes in the quasi-equilibrium shoreline position changes are discussed in terms of the coastal engineering works, which have seen the elongation of the Port of Klaipeda groins and deepening entrance channel.