

Sour life – The influence of seawater acidification on different life stages of benthic organisms from the Baltic Sea (BIOACID subproject 4.1.2)

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The response of not only different species, but also of different life stages of the same species of marine organisms to environmental stress, such as seawater acidification, may vary. Moreover, due to its strong stratification and its hypoxic zones, the Baltic Sea is temporally a naturally acidified habitat. In the western Baltic surface pCO₂ levels may exceed 2500 µatm already today. Organisms from this habitat may therefore be pre-adapted to conditions of acidification.

We investigated whether or not levels of acidification temporally experienced in the Baltic Sea today (1120 µatm) and levels expected by the end of the century (4000 µatm) influence different life stages of the widely distributed barnacle *Amphibalanus improvisus* and the common sea star *Asterias rubens*.

We will present results as to how the vulnerability towards seawater acidification varies between these two species and how some life stages of certain species may be more affected than others.

We conclude that habitat structures may change under conditions of acidification, depending on the vulnerability of certain groups compared to others.