



Numerical modeling experiments of coastal upwelling at the field of Arctic fjords.

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Coastal upwelling is a well described, known phenomenon in theory. Nowadays there is more and more both environmental and modeling studies about it. Upwelling especially in the Arctic fjords is a process that strongly affects hydrodynamics and even more ecosystems. It is so important, that it brings detailed question about effects and needed wind driven forcing parameters. My modeling experiment studies were strongly different than the studies that are typically carried out using numerical models. Instead of searching for this phenomenon in modeled analysis or environmental data, I did several case scenarios simulations. For those I used statistically selected wind data measured in-stiu. The hi-resolution coastal mapping, the flexible mesh discretization method and the sigma-layered three dimensional model MIKE 3 by DHI allowed me to explore this phenomenon with very good accuracy. This studies have been done in Institute of Oceanology PAS in Sopot, as a part of Centre for Polar Studies.