



A study of the German Bight circulation using a nested ocean circulation model

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The circulation and temperature/salinity variations of the German Bight are studied here using simulations with a nested grid General Estuarine Transport Model (GETM). The large model area includes the North Sea, where the horizontal resolution is 3nm. Using one-way coupling we make boundary conditions available for the fine resolution model (1 km grid). The model in both domains are driven by the atmospheric fluxes estimated by the bulk formulation using ECMWF reanalyses data. The river-runoff is also considered in both model configurations. The response of simulated circulation and vertical stratification to the surface forcing is addressed, as well as the development of thermohaline stratification. The model tidal currents are compared against previous model results, in situ, and satellite observations. The contribution of local and remote forcing to the formation of seasonal and interannual variations is also analysed.