In this project, scenario simulations for the Baltic Sea will be performed. Previous work is mainly based on the results of one regional climate model. We plan to complete 48 scenario simulations in this project, considering four global climate models driven by two Shared Socioeconomic Pathways, two Representative Concentration Pathways, and three mean sea level scenarios. Using a different regional ocean model reduces the uncertainty associated with the model's choice. Therefore, climate extremes and other ecosystem changes can be assessed more robustly. In this project, we will use an improved biogeochemical model that uses a non-Redfield carbon model for the Baltic Sea (ERGOM version 1.2). This allows a more detailed analysis of ecosystem changes within the Baltic Sea, such as ocean acidification.