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Parameter Estimation in Ecosystem Modelling

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C:N Regulated Ecosystem Model (REcoM), developed within the TOPAZ project and describing the carbon and nitrogen fluxes between components of the ocean ecosystem, is validated for two different locations in the North Atlantic . The subject of the study is to investigate whether the model is applicable for the MERSEA operational use on a basin scale. Time series data are used for the validation and tuning the biogeochemical model. Sequential Important Resampling filter (SIRF), an ensemble based data assimilation technique, is implemented to optimize poorly-known model parameters and to determine the possible model errors in the parameterization of the biogeochemical fluxes.