

Figure S1. Sampling stations coded according to whether any soft-bottom, deep-sea sponges (or the model target taxa) were detected. This information is interpreted as presence/absence in the text

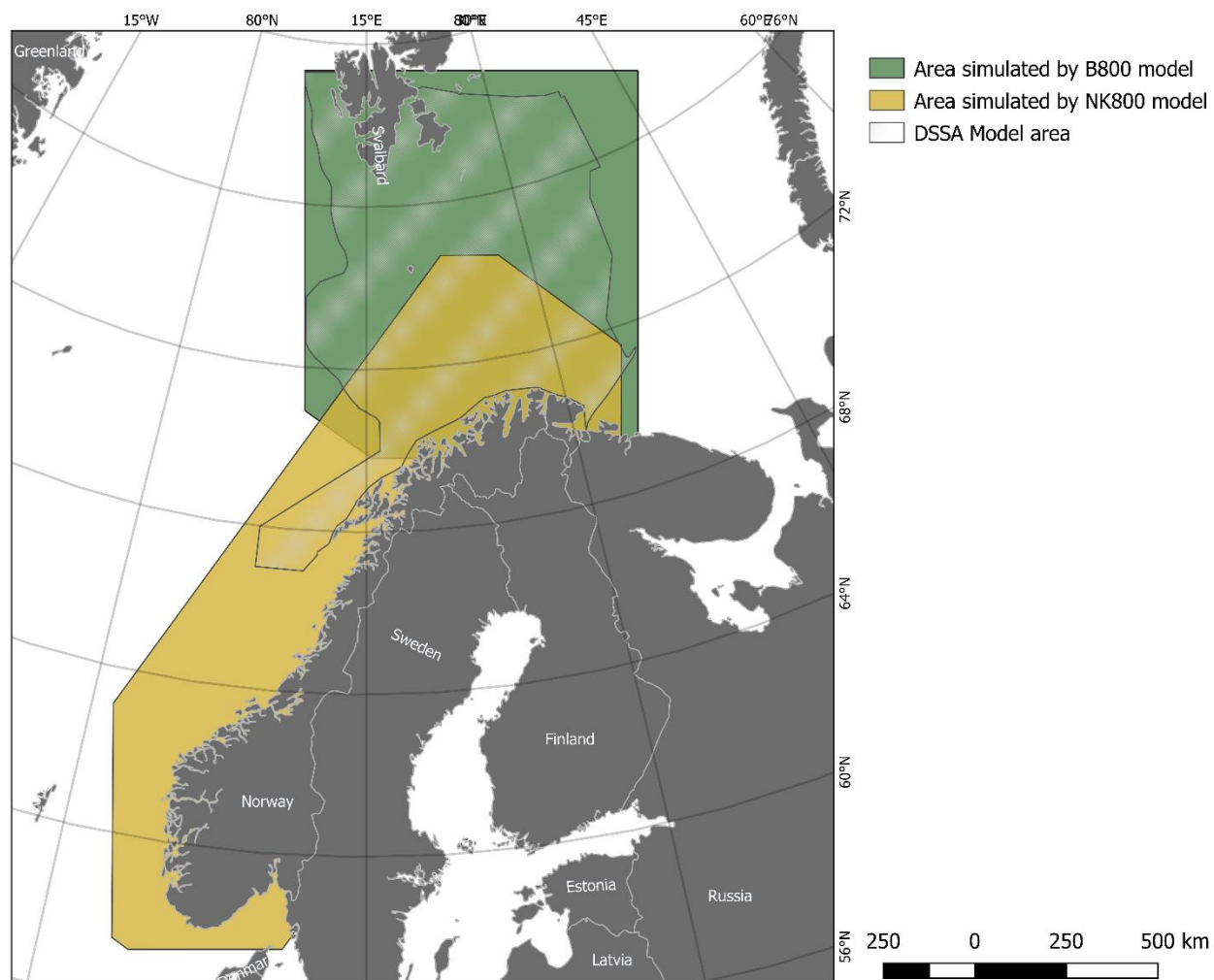


Figure S2. This map shows the areal coverage of the oceanographic data available in relation to the soft-bottom, Deep-sea Sponge Aggregation (DSSA) model area. Neither the NorKyst-800 (NK800) model nor the Barents Sea-800 (B800) model provided complete coverage of the area of interest, so the two were combined into one

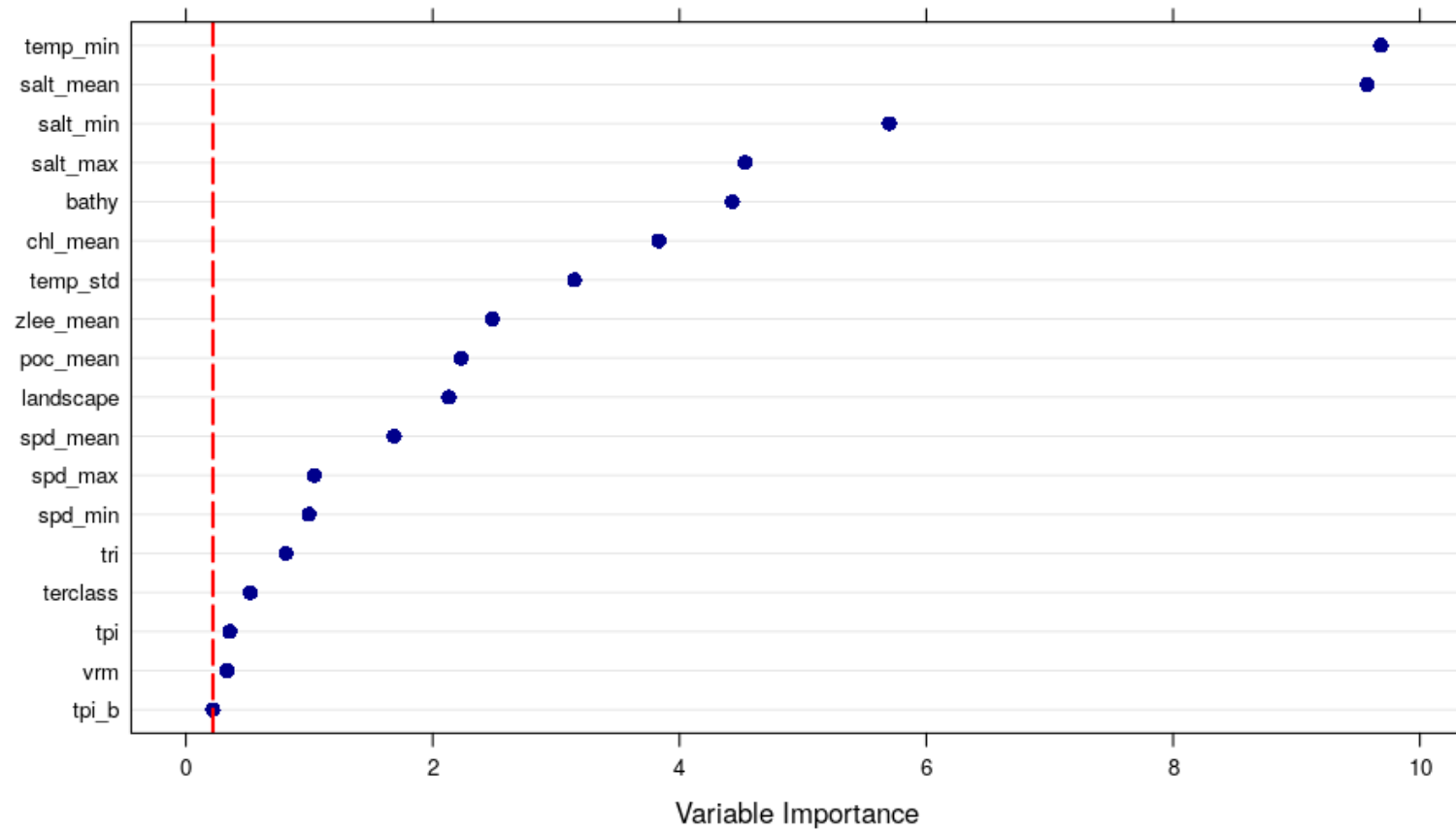


Figure S3. Importance of environmental variables to predict density of soft-bottom, deep-sea sponges (predictors to right of dashed vertical line are significant according to a conditional inference forest model)

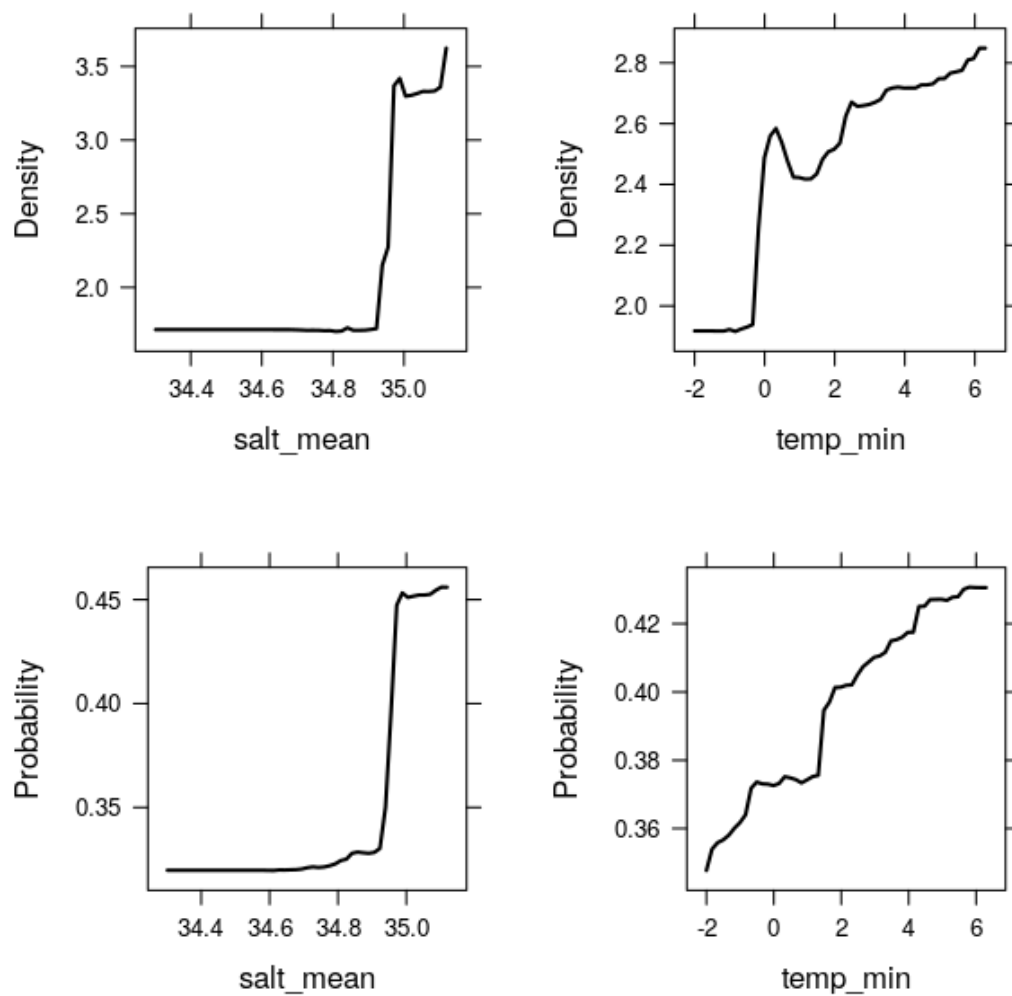


Figure S4. Partial dependence plots between mean salinity (left) and minimum temperature (right) and expected total density (top) and probability of occurrence (bottom) of soft-bottom, deep-sea sponges (model target taxa), assuming that all other environmental variables are their averages. Mean salinity and minimum temperature were chosen because they were the two predictors that had the most importance in explaining the variability in the response.