



**Supplementary Figure 4.** Changes over time (1950-2013) in biomasses of aggregated compartments from Ecosim simulations of model M10. Blue line shows mean value from 200 Monte Carlo replicates. Blue bands shows 2.5 and 97.5 % percentiles. In M10, Ecosim model phytoplankton biomass is forced by PPR-proxy and herring-capelin mortality interaction is included.