

Small scale flatfish nursery differences in the southern Bight of the North Sea

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Shallow coastal areas and estuaries in the Southern North Sea function as a nursery area for many marine species. The nurseries may differ significantly in quality along a small spatial scale caused by local (a)biotic conditions, and therefore nurseries will differ in recruitment output to the adult population. Determining nursery areas where fish body condition and abundance is high is a valuable tool to evaluate and form coastal zone management and policy making. In this study we will examine if there are small scale differences in (a)biotic variables, abundance, growth and condition among intertidal and subtidal flatfish nursery areas along the French – Belgian coast. Also, it has been more than 15 years since data on Belgian flatfish nurseries has been collected. Sampling occurred monthly in 2013 and 2014, in 5 intertidal ‘beach’ stations and 8 subtidal ‘Sea’ stations. Length, weight and abundance data of 6 juvenile flatfish species were obtained (Plaice, Turbot, Dab, Brill, Flounder and Sole), the epibenthic community was sampled and data on abiotic parameters such as temperature, salinity, depth and sediment were gathered. Preliminary results indicate that both environmental and biological data showed significant temporal and spatial variation, and with further analysis we will infer what parameters are responsible for the observed abundance patterns, what factors are important for flatfish settlement.

Keywords: nursery area; juvenile flatfish; small scale variability; French-Belgian coast