

Spatial differences in growth of lesser sandeel in the North Sea - DTU Orbit (08/11/2017)

Spatial differences in growth of lesser sandeel in the North Sea

Lesser sandeel, *Ammodytes marinus*, is a key prey to a variety of North Sea predators, including species such as single load seabirds which are highly sensitive to prey size and condition. Whilst differences in weight at age across the North Sea have been investigated previously, the scale and cause of this variation as well as the potential link to spatial differences in predator performance remains unknown. This study presents an analysis of spatial patterns in length and condition of the lesser sandeel in the North Sea and the relationship of these with physical and biological factors. Both mean length at age and condition was higher on warmer, deeper and central/north eastern fishing grounds. Sandeel in the water column exhibited large changes in condition over the season, having an initially low condition following spring emergence rising to a pronounced peak by June. Weight at age varied considerably both spatially and temporally, resulting in 4 fold and 1.9 fold variations in the number of sandeels required to obtain a specific weight, respectively. Hence, the value of sandeel as prey to single load predators varies considerably with values in central and northeastern North Sea being substantially higher than in northwestern and southern areas.

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