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How larval dispersal of flatfish is impacted by life traits ?

Among fish, early life stages are critical in determining dispersal and recruitment. Effective fishery management requires the understanding of how spawning grounds and nurseries are connected and what processes influence larval retention, dispersal and population dynamics. Especially for species with a long pelagic larval phase and where the recruitment is strongly constraint by access to nurseries, like flatfish. The transport of flatfish larvae from the spawning grounds to the nurseries is driven by hydrodynamic processes, but the final dispersal pattern and larval survival is affected by environmental factors, physiology, behaviour and reproductive strategies (spawning period and spawning grounds). Here we use a particle-tracking transport model (Larvae&Co) coupled to a 3D hydrodynamic model to assess the connectivity pattern between spawning grounds and nurseries of four commercial flatfish species in the North Sea. We analyse comparatively the impact of different life traits on dispersal of sole (*Solea solea*), plaice (*Pleuronectes platessa*), turbot (*Scophthalmus maximus*) and flounder (*Platichthys flesus*).

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