

Dispersal of and connectivity between marine populations – thoughts on (non-)indigenous species

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The high potential for dispersal of marine organisms is constrained by behaviour. However, the degree to which passive hydrodynamic forces (advection and diffusion) and active biological forces (life history traits and behaviour) play a role is not well understood. Also the importance of connectivity between habitats used during a life time is poorly known. That is unfortunate because they are essential features for the long term survival of native organisms and hence the communities they live in. But the same features influence the dispersal of non-indigenous species. Tools such as microchemical analyses of otoliths, genomic markers and modelling have sufficient resolution to clarify dispersal patterns in the present and the past. In one case, the dispersal patterns of sole *Solea solea* are increasingly understood. The insights are extrapolated to other organisms, including non-indigenous species.