Modelling the recruitment of European eel (Anguilla anguilla) throughout its European range - DTU Orbit (30/09/2019)

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European eel (Anguilla anguilla) recruitment has been declining at least since the early 1980s at the scale of its distribution area. Since the population is panmictic, its stock assessment should be carried out on a range-wide basis. However, assessing the overall stock during the continental phase remains difficult given its widespread distribution among heterogeneous and separate river catchments. Hence, it is currently considered by the International Council for the Exploration of the Sea (ICES) more feasible to use glass eel recruitment data to assess the status of the overall population. In this study, we used Glass Eel Recruitment Estimation Model (GEREM) to estimate annual recruitment (i) at the river catchment level, a scale for which data are available, (ii) at an intermediate scale (6 European regions), and (iii) at a larger scale (Europe). This study provides an estimate of the glass eel recruitment trend through a single index, which gathers all recruitment time-series available at the European scale. Results confirmed an overall recruitment decline to dramatically low levels in 2009 (3.5% of the 1960–1979 recruitment average) and highlighted a more pronounced decline in the North Sea area compared to elsewhere in Europe.

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