

Alien fauna and flora in the Scheldt Estuary (Zeeschelde, Flanders, Belgium)

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Over the last 150 years, the number of non-native species occurring in areas far from their original range has increased significantly, also in the North Sea and adjacent estuaries. The Scheldt Estuary is no exception. Persistent ecosystem monitoring as well as less structured additional sampling in the Zeeschelde (the Flemish brackish and freshwater part of the Scheldt Estuary) allows documentation of presence, abundance and spatial distribution of vascular plants, macroinvertebrates and fish. Among all three groups of biota, non-indigenous species are found. Thirty-eight non-native plant species have been found, of which four are considered invasive, thus a threat to natural tidal marsh vegetation. Forty-six or forty-seven non-indigenous invertebrate species, discovered from as early as 1835 until as recently as 2012, include annelids (10 or 11 species), crustaceans (17 species) and molluscs (9 species). Among the fish fauna, six species are considered of alien origin and one additional species is treated as naturalised, while more species may be expected in the near future. Continued monitoring allows tracing the evolution of these species within the estuary through time and space, and can provide information on how to deal with invasive species.