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The invasive comb jelly *Mnemiopsis leidyi* in Europe and in the Baltic Sea: Invasion history, distribution, phenology and ecosystem impacts

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The comb jelly *Mnemiopsis leidyi*, native to the east coast of the Americas, has a long invasion record and is known to affect invaded ecosystems including commercially important fish, either by direct predation on eggs and larvae or by competition for the same prey resources. In the 1980's it was introduced to the Black Sea, where it has contributed to the decline of several fish stocks. Since its introduction to northern Europe in the mid 2000's, DTU AQUA has initiated and participated in a number of studies addressing key questions about its population dynamics, invasion success and feeding preferences. The present poster presents a selection of these, including a reconstruction of the invasion history in western Eurasia based on >12,000 geo-referenced occurrence data, an analysis of secondary dispersal via ocean currents, as well as the seasonal phenology in the main spawning area of Baltic cod and sprat and associated ecosystem impacts. While ballast water releases are believed to be the main vector of primary introductions, our results highlight the importance of ocean currents driving secondary spread dynamics of non-native marine species. The impact of *Mnemiopsis leidyi* on Baltic fish stocks is presently regarded to be negligible due to a lack of overlap between the ctenophore and fish early life stages in time and space as well as low biomass of *M. leidyi* in the relevant areas as a result of reduced reproduction in the low saline central Baltic Sea.

