

European Navigational Hazard Infrastructure: a collaboration data sharing platform supporting an enhanced situation awareness to reduce the risk of collision during navigation

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Although navigators are educated according to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, have skills honed by years of experience and a tacit understanding of safe navigation, accidents still occasionally happen. Apart from collisions and groundings, there is an increased focus on the thousands of ships striking marine mammals every year, often killing the animals. One of the root causes is that navigators are unable to see the animals early enough or even not at all. Not having full situational awareness is a similar problem when it comes to containers washed overboard and remaining afloat, posing a potentially fatal hazard to lightly built ships and leisure craft. Increased navigator awareness is the goal in the OCEAN¹ project, developing end-to-end hazard detection and publishing of navigational warnings to navigators, to reduce risk and save lives. The ‘European Navigational Hazard Infrastructure’ (ENHI) is the backbone towards this objective, being an ecosystem composed of interfaces with a wide variety of data sources, detection algorithms and prediction models together with storage, processing and management capabilities. The ENHI has the pivotal role of collecting data from observations, hydroacoustic systems, environmental niche model predictions of marine mammal density, container drift models as well as automated satellite imagery analysis, of fusing and processing data from these disparate sources and, finally, to create the information required to support navigational warning publishing services.

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