

Reducing the risk of ship strikes and improving the knowledge on cetaceans in the Pelagos Sanctuary: the REPCET system.

Abstract:

In the Mediterranean Sea, ship strikes are one of the main threats to fin whale (*Balaenoptera physalus*) and sperm whale (*Physeter macrocephalus*) populations, especially in the PELAGOS Sanctuary where cetacean densities and traffic intensity are highest in summer. To reduce the risk of ship strikes in the Sanctuary, the REPCET (REal-time Plotting of CETaceans) system was created in 2009. It is a collaborative client-server system through which equipped ships can transmit the positions of the whales they encounter to one another via satellite or internet connection. When a whale position is received, a risk zone appears on the screen and grows with time to a certain radius and at a certain speed according to our knowledge of whales' swimming speed in the area. When a ship enters a risk zone a visual or acoustic alarm is triggered and crews are recommended to increase their watch and reduce speed. In 2011, this system allowed to record 105 sightings (31% striped dolphins, 26% fin whales, 10% sperm whales, 23% undetermined, 10% other small cetaceans) of 232 individuals (53% striped dolphins, 21% fin whales, 5% sperm whales, 15% undetermined, 6% other small cetaceans). In 2012, 192 sightings were made (+83%) representing 525 animals (+102%). In this year striped dolphins and fin whales both represented 36% of the sightings and sperm whales 9%, while striped dolphins accounted for two-third of the individuals. These data could potentially be a source of valuable information on these species in the Sanctuary. However, lots of problems are inherent to opportunistic data made from different observers. Any scientific advice, suggestions and collaborations are welcome to improve the system and the analysis of the data in the frame of the PELAGOS Sanctuary research programs.

Reference:

Couvat J., Mayol P. and Gadaix B. (2013) - *Reducing the risk of ship strikes and improving the knowledge on cetaceans in the PELAGOS Sanctuary: the REPCET system*. 27th Conference of the European Cetacean Society. 8-10 April 2013, Setubal, Portugal. Oral comm.