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## Seminar

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**11:00 - 11 Nov 2020 - Webex platform**

### Title

Bottlenose dolphins in the north-western Adriatic Sea: abundance, spatial distribution and interactions with trawling

### Abstract

1. The Adriatic Sea is one of the Mediterranean areas most heavily impacted by fishing and other human stressors. The northern part of the basin has been identified as an Important Marine Mammal Area because of a regular occurrence of common bottlenose dolphins \**Tursiops truncatus*\*.
2. Boat surveys, totalling approximately 15,000 km of navigation, were conducted between April 2018 and October 2020 to assess cetacean abundance, distribution and habitat preferences within a 3,000-km<sup>2</sup> area off Veneto, Italy.
3. Model-based estimates based on photographic capture-recapture indicated that approximately 600 individuals occur annually within the study area. Abundance varied greatly among months (approximately between 100 and 500 animals per month).
4. A combined GAM-GEE framework indicated that trawling--along with other physiographic, biological and anthropogenic variables--influenced dolphin distribution.
5. Bottlenose dolphins off Veneto take advantage of feeding opportunities provided by trawling. In days of trawling, the chance of encountering dolphins increased by approximately 5 times near active beam trawlers, 16 times near otter trawlers, and 29 times near midwater pair trawlers.
6. Spatial modelling was used to create maps of predicted distribution, suggesting differences in habitat use between trawling and no-trawling days. Spatial modelling for all days identified a dolphin distribution hotspot situated off the Po river delta.
7. Evidence provided by this (ongoing) study can be used to 1) complement and validate coarse snapshot information from recent aerial surveys of the entire Adriatic Sea, 2) enforce management action within one of the world's areas most heavily impacted by fishing and other human encroachment, consistent with the European Community (EC) Habitats Directive and Marine Strategy Framework Directive, while also guiding the EC's Maritime Spatial Planning, and 3) assess the effects of the recently-created Site of Community Importance "Adriatico Settentrionale Veneto - Delta del Po".

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