Abstract ID : 767

Title : DIVING AND FORAGING BEHAVIOUR OF HARBOUR SEALS IN THE SOUTH-EASTERN AND CENTRAL NORTH SEA

Category : Ecology

Student : Not Applicable

Preferred Format : Oral Presentation

Abstract : The International Wadden Sea in the south-eastern North Sea houses around 25.000 harbour seals (Phoca vitulina). A satellite telemetry study was conducted in connection with environmental impact assessment studies (EIA) related to construction of the worlds largest offshore wind farm at Horns Reef, Denmark. Satellite linked time-depth recorders (Wildlife Computers TSD16/ARGOS) were glued onto the head of ten harbour seals from the Danish Wadden Sea on three separate occasions in winter and spring 2002. Tag positions and dive information (6 hour summary histograms), were received daily. Median tag lifetime was 77 days (range 49 to 100 days). Positional information revealed unexpectedly large movements of the seals. Several animals ventured out to the central North Sea in the winter months, more than 250 kilometers from haulout banks, and remained there for periods up to two weeks. Animals tagged in spring remained closer to the Wadden Sea. There was a large overlap between areas visited and areas frequented by Danish sandeel (Ammodytes sp.) fishermen.
Dive depth data showed numerous and repeated dives to the bottom. Maximum dive depth was 72 meters. In offshore waters, the animals spent 80-90% of their time submerged, more during day than night. Dives were short and presumably within the aerobic capacity of the animals (50% shorter than 2.5 minutes, 95% shorter than 6 minutes and only 112 dives longer than 13 minutes; n = 182,429). Mean dive duration correlated positively with animal size and dive depth. Haulout was predominantly in the vicinity of the capture site, but also a significant number of haulouts were in Germany and the Netherlands. These results lead to a change in the view of harbour seal foraging behaviour, from being predominantly coastal to covering the entire North Sea, and consequently also a reduction in the assessed impact of the wind farm.