

Dramatic decline of a Dover Strait harbour seal (*Phoca vitulina*) population exposed to a transient industrial disturbance

The harbour seal (*Phoca vitulina*) is the most widely-distributed pinniped. Because harbour seals are a coastal species, they are easily affected by habitat disturbance and alteration. Even if it is still extremely difficult to demonstrate a cause and effect relationship, local declines in the abundance of harbour seals may potentially be linked to the stress of exposure to aversive acoustic stimuli or other types of harassment. The present and future status of harbour seal populations and the designation and monitoring of protected areas is a matter of concern.

A six-year (1999–2004) survey investigated the population dynamics of harbour seals on an isolated tide bar (50°59'40"N 1°54'55"E) localized in the Strait of Dover. Here the scarcity of sheltered tide bars, sandy or cobble beaches, the absence of an intertidal reef and the intensity of disturbance related to anthropogenically-driven industrial and commercial activities are likely to affect their haul-out behaviour and population dynamics. Underwater industrial activities devoted to the installation of industrial wastewater pipes and conducted during seven weeks (14 April–31 May 2003) from a floating platform 1 km south of the bar led to a dramatic decline in the abundance of harbour seals. No seals were observed during the seven weeks of industrial activities, and over the 19 months that followed the end of the industrial disturbance, the

mean seal abundance was 15 times smaller than it was before.

The extreme vulnerability of harbour seals to anthropogenically-driven disturbance illustrated here is likely to be a critical issue for species conservation in many regions of the world ocean where its habitats are subjected to an increasing pressure from industrial and commercial activities.

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