

Spotlight on the state of the marine environment theme

Strandings of whales, dolphins and porpoises ([WC0601](#))

For centuries, cetaceans (whales, dolphins and porpoises) have regularly become stranded around the coasts of the UK (Figure 1). The reasons are often unclear and whether human activity directly or indirectly causes single or mass strandings remains controversial

Since 1990, the collaborative UK Cetacean Strandings Investigation Programme has been funded by the UK Government, and more recently the Devolved Administrations, to record all strandings of cetaceans around the UK coast and to retrieve some for post-mortem investigation. Information from stranded animals indicates the species found in UK waters and often the likely cause of death. Post-mortem examinations can give further insight into causes of death, diseases, environmental contaminant levels, reproductive patterns, diet and other aspects of the health of cetacean populations in our seas.

This project set up a database to provide a systematic, co-ordinated approach to the surveillance of cetacean strandings in the UK and the investigation of causes of death. It analysed and reported data for all strandings around the UK coast; determined the causes of death in 100 stranded cetaceans a year; and recorded diseases in stranded cetaceans to identify any major new threats to their conservation.

Figure 2 shows trends in the proportion of the two most common UK-stranded cetacean species which have died through being accidentally caught in commercial fishing gear (bycatch) off the south-west of England over ten years from 1990. The proportion of stranded harbour porpoises varied a lot from year to year. However, the proportion of common dolphins has recently declined from consistently high levels to their lowest level in 2008 – but we do not yet fully understand the reasons for this.

Causes of death in harbour porpoises and common dolphins, other than as bycatch, include attack by bottlenose dolphins, live stranding, starvation and a range of mainly parasitic and bacterial infectious diseases including cetacean brucellosis. There is also a strong link in UK-stranded harbour porpoises between exposure to pollutants which suppress the immune system, such as polychlorinated biphenyl (PCB), and death from infectious disease, suggesting that current levels of exposure to pollutants can indirectly cause death. Levels of PCBs in species which are a priority for conservation, such as bottlenose dolphins, are particularly high, suggesting that these pollutants continue to pose a serious threat.

The integrated database of information on the location of strandings and post-mortem data collected by the UK Cetacean Strandings Investigation Programme since 1990 is available for use by stakeholders, and data are also added to the National Biodiversity Network gateway (<http://data.nbn.org.uk/>). A further resource is the national cetacean tissue archive which has samples from over 2700 stranded cetaceans examined at post-mortem.

The data allow investigation of trends in location and time for diseases, causes of death and exposure to environmental pollutants. They also provide a baseline to help detect any future outbreaks of disease, unusual deaths or responses to climate or other environmental change. The information is helping to ensure that the UK complies with national and international agreements

or obligations, including the Habitats Directive and the Agreement on the Conservation of Small Cetaceans in the Baltic and North Sea (ASCOBANS). Above all, the project is helping us to conserve whales, dolphins and porpoises in our seas.

The UK Government and Devolved Administrations are continuing to support the UK Cetacean Strandings Investigation Programme and it has been extended to collect data on stranded marine turtles and basking sharks.



Figure 1: Stranded sperm whale near Kings Lynn, Norfolk (Image: Rob Deaville)

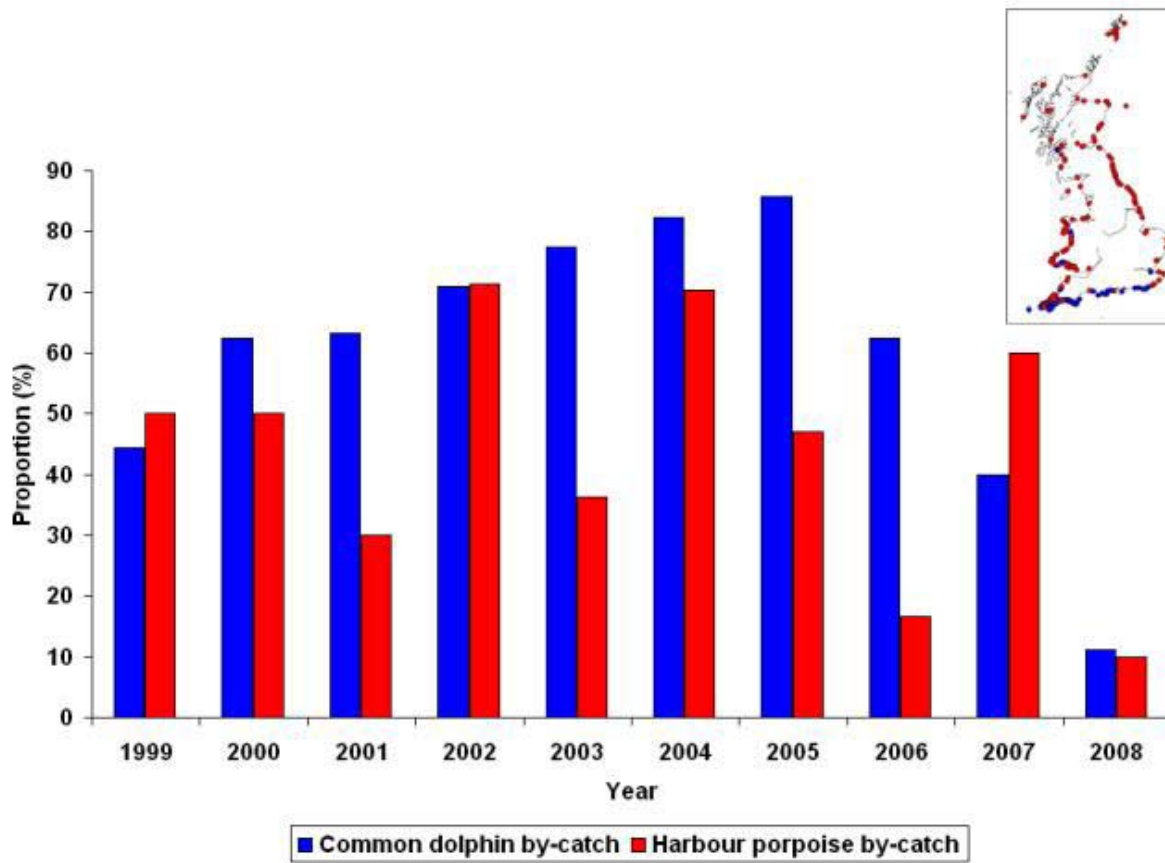


Figure 2: Variation over time in the proportion of bycatch of stranded common dolphins and harbour porpoises in south-west England 1999-2008. Inset map shows UK distribution of bycatch in these two species over the same period (Images: CSIP)