

Dolphins from Southern European waters accumulate pollutants in their bodies

April 20 2015, by Mercè Fernández

A study published in *Environmental Pollution* magazine shows that three dolphin species from the Strait of Gibraltar and the Gulf of Cadiz accumulate flame retardant pollutants in their bodies, including the classical PBDEs, which are already prohibited, and the alternative flame retardant called dechloranes.

Flame retardants are compounds widely used in industry. They are added to all kinds of goods, such as clothing, electronic devices, furniture and broad tapestry, in order to reduce the risk of fire. It has been demonstrated that they remain in the environment for a long time, accumulate in organisms, and may have toxic effects on wildlife and humans.

This work, led by the Institute of Environmental Assessment and Water Research Studies (IDAEA) of the Spanish National Research Council (CSIC), included the participation of scientists at the Doñana Biological Station (EBD-CSIC), and CIRCE (Conservation Information and Research on Cetaceans).

The study has been developed in the frame of FLAME, ECOCET and Consolider SCARCE projects, and has been funded by Loro Parque Fundación, CEPSA and the former Spanish Ministry of Science and Innovation.

Accumulation and biomagnification of this pollutants

Scientists have shown in the study that three dolphin species, short-beaked common dolphins (*Delphinus delphis*), bottlenose dolphins (*Tursiops truncatus*) and long-finned pilot whales (*Globicephala melas*), which have different geographical distributions and diets, accumulate and biomagnify [flame retardants](#).

The work demonstrates that the cetaceans that are in the highest level of the [food chain](#), accumulate larger amounts of these pollutants. Ethel Eljarrat, scientist from the CSIC says, "Biomagnification means that the higher up the food chain, the bigger concentration of toxin in the organisms, because the animals are eating and accumulating the pollutants contained in their prey. The most interesting thing is that both PBDEs and also dechloranes are biomagnified".

Provided by CSIC

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