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Increased CO2 in Oceans Will Disorient Fish Sooner than Expected

21/01/2016



The results have "massive implications for global fisheries and marine ecosystems across the planet," said Ben McNeil, scientist at the University of New South Wales, or UNSW, and lead author of the study.

According to a UNSW statement, the study, the first to have carried out a global analysis of the impact of this phenomenon, says increased CO2 concentration in water leads to an abnormal rise in CO2 levels in the blood of the fish, a condition known as hypercapnia.

"The carbon dioxide affects their brains and they lose their sense of direction and ability to find their way home. They don't even know where their predators are," McNeil said in a statement.

He warned the rise in atmospheric CO2 pollution will cause hypercapnia in fishes and other marine species in places with high concentrations of this element in the North Atlantic, Pacific and Antarctica, towards the middle of the century.

The problem will not only occur much sooner than expected but its effects will also be more serious than what was previously believed, said McNeil who added "by 2100, creatures in up to half the world's surface oceans are expected to be affected by hypercapnia."

Experts calculate hypercapnia will affect marine life when atmospheric CO2 concentrations surpass 650 parts per million.

UNSW scientists made use of a global database of seawater CO2 concentrations of the last 30 years for the study.