

POTENTIAL IMPACTS OF GLOBAL **WARMING ON CETACEANS**



Delphine GAMBAIANI (1), Pascal MAYOL (1) & Stephen ISAAC (2)

1- Souffleurs d'Ecume Association: pmayol@souffleursdecume.com; 2- Whale and Dolphin Conservation Society: steve.isaac@wdcs.org



INTRODUCTION

The impact of global warming on marine ecosystems is today widely recognised. The aim of the study is to show how anthropogenic climate change could affect cetaceans.

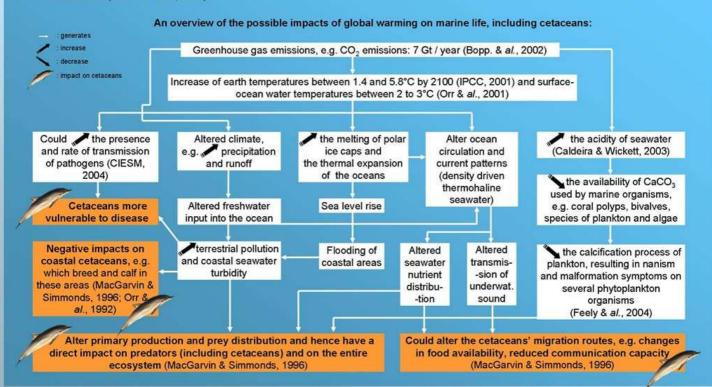
MATERIALS AND METHODS

We undertook a literature review to illustrate the potential impacts of global warming on marine organisms, including cetaceans, worldwide.

RESULTS

A few examples of marine organisms affected by global warming:

Salmon in Iceland (Scarnecchia, 1984) and in the north-eastern Atlantic (Beaugrand & Reid, 2003); basking sharks in southwest Britain (Cotton & al., 2005); herring in southern England (Southward & al., 1998), several species of intertidal zooplankton in England (Southward & al., 1998; Roemmich & McGowan, 1995); cephalopods in the English Channel (Sims & al., 2001); the endemic cave-dwelling invertebrate (Memimysis speluncola) (Chevaldonné & Lejeusne, 2003); tropical delphinids (Robinson & al., 2005); pacific killer whales and Atlantic bottlenose dolphins (Lusseau & al., 2004); cetaceans of north-west Scotland (MacLeod & al., 2005).



CONCLUSION

This review illustrates how global warming could seriously affect the worldwide conservation of cetaceans by changing the distribution, physiology and behaviour of these animals. Therefore, it is necessary to improve our knowledge about this phenomenon and consider it as a real middle-term threat for cetacean populations.

REFERENCES

ne C.L., Le Quéré C. & Key R.Met Boutin J. (2001) - Estimates of anthropogenic carbon uptake from four three-dimensional global

tory species. BTO Research Report 414, British Trust for Ornithology, Thetford, Norfolk, U.K.