

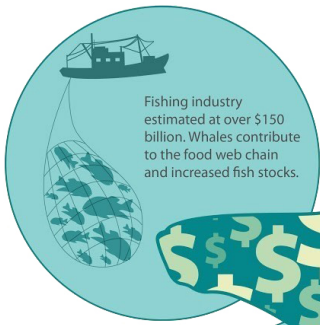
Improving cetacean conservation through understanding species' preferences

By Jack Ashton

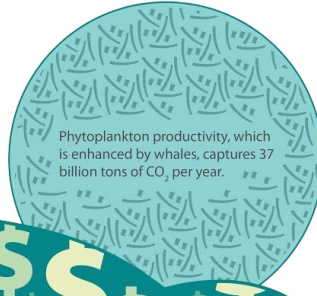


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Among other benefits, did you know that cetaceans offer a huge carbon capture potential, comparable to trees? [1]

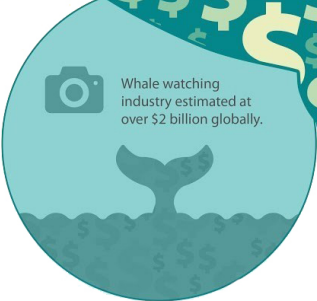
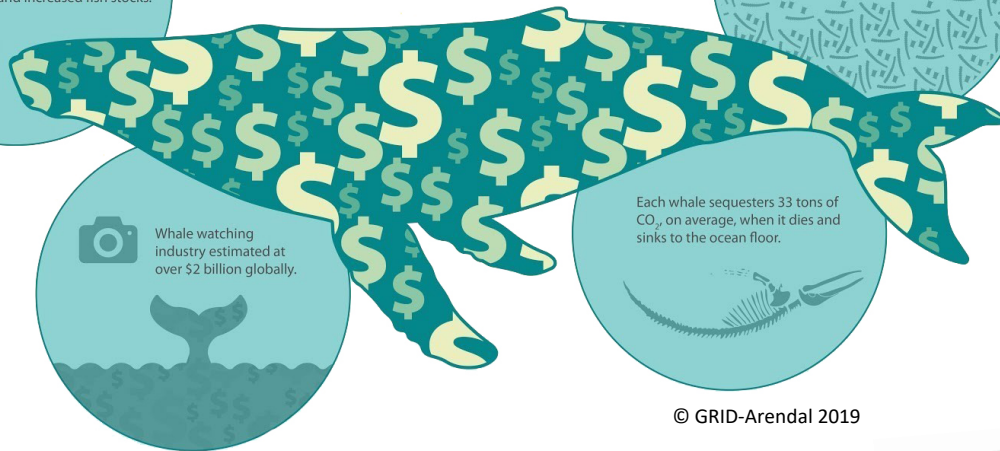


Fishing industry estimated at over \$150 billion. Whales contribute to the food web chain and increased fish stocks.

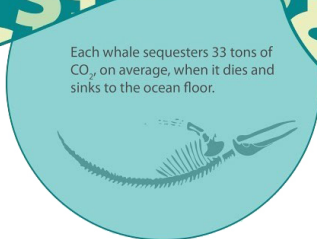


Phytoplankton productivity, which is enhanced by whales, captures 37 billion tons of CO₂ per year.

Unfortunately, even though they play an important role in our fight against climate change, it is exactly that which poses their greatest threat



Whale watching industry estimated at over \$2 billion globally.

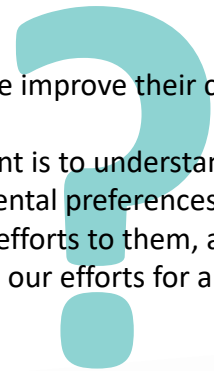


Each whale sequesters 33 tons of CO₂, on average, when it dies and sinks to the ocean floor.

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So, how can we improve their conservation?

A starting point is to understand a species' environmental preferences to tailor conservation efforts to them, as we cannot generalise our efforts for all species



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My study focused on a population of fin whales in the Bay of Biscay

I found that they prefer deep water with low chlorophyll concentrations

This directly correlated to conditions present in Bay of Biscay abyssal plain

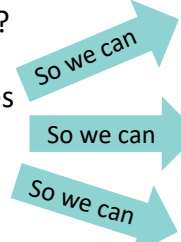
Which suggests that conservation should be targeted to this hotspot to preserve fin whales here



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But, how can this help to conserve Cornish fin whales, and other cetaceans?

We can use it as a template for fin whales off Cornwall, or replicate the study for Cornwall's 12 cetacean species [2]



Understand how climate change affects cetaceans; allowing us to avoid some strandings, like the starved 19.25m fin whale which sadly washed up on the Lizard in February

Identify important conservation areas for Cornish cetaceans

Identify hotspots to inform ships to take more care as, for example, fin whale are struck more frequently than any other great whale [3]

What is the wider context of this improved conservation?

Retains our Cornish cetaceans - because after all, who doesn't love seeing them?

It can help to keep food webs around the world stable and productive

Retains the carbon capture potential that cetaceans offer

[1] Chami, R., Cosimano, T., Fullenkamp, C. and Oztosun, S. (2019). Nature's Solution to Climate Change. *Finance & Development*, 56(4).
 [2] Cornwallmammalgroup.org. 2020. [online] Available at: <https://www.cornwallmammalgroup.org/mammals-a-z> [Accessed 7 April 2020].
 [3] Carwardine, M. and Camm, M. (2019). *Handbook of Whales, Dolphins and Porpoises*. London: Bloomsbury.