

TRACKING WHALES IN THE NORTH-ATLANTIC



USE CASE OVERVIEW



Highly migratory species such as whales are often exposed to anthropogenic threats. A research led by the University of the Azores focussed on the migration pathways of three whales species from the North Atlantic Ocean: fin, blue and sei whales. They described their spatiotemporal distribution to understand their movement patterns and provide sustained data to protect them against ship collisions and noise disturbance.

To create an accurate tracking model, they used several data sets, including CMEMS data. Researchers modelled the whales' habitat preferences in light of certain environmental and prey-related variables. Potential prey biomass distributions were obtained from SEAPODYM, a mid-trophic level spatial ecosystem and population dynamics model. This biomass distribution was provided by CMEMS micronekton product, which contained parameters such as zooplanktons and micronektons. They are key explanatory variables for understanding the individual behaviour and population dynamics of larger oceanic predators.

BENEFITS FOR USER

- Levels of zooplanktons and micronektons in the global ocean
- Lower trophic level biomass information to understand large species migrations

• BALEEN-WHALES CONSERVATION • MIGRATORY SPECIES MODEL • MICRONEKTON



MARINE
CONSERVATION
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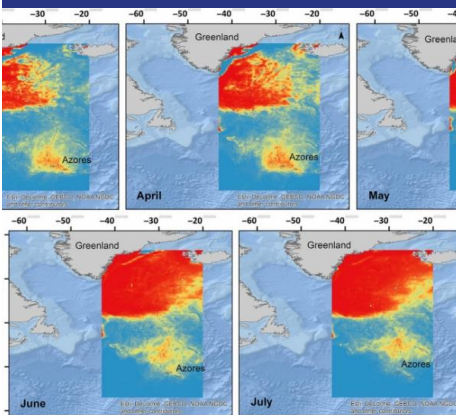


FACTS AND KEY NUMBERS



Migratory marine animals are increasingly vulnerable to extinction and population declines due to cumulative anthropogenic impacts on their environment. Baleen whales are the largest animals on earth, yet the 3 species (blue, fin and sei) have suffered from overhunting. They are now considered 'endangered' on the IUCN Red List of Threatened Species™. They feed on some of the smallest animals in the ocean such as zooplanktons and micronektons. Climate change could alter their habitat preference to northward waters, and this could make them more vulnerable.

CMEMS PRODUCT IN USE



CMEMS Global ocean low and mid trophic levels biomass hindcast product was released in July 2019 and contains parameters such as zooplanktons and micronektons, which are small organisms at the low and mid-trophic levels of the ocean food chain.

Product in use 1

CMEMS USER



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The Azores Whale Lab of the University of the Azores has been conducting cetacean research in the most remote archipelago in the North Atlantic for the last 20 years and has applied that knowledge to aid in their conservation. Collecte Localisation Satellites (CLS) is a subsidiary of CNES, ARDIAN & IFREMER and a worldwide provider of monitoring and surveillance solutions for the planet.



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