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## Determining the Cape Verde island mass effect across trophic levels

The pelagic ecosystem off Cape Verde is influenced by a mesopelagic oxygen minimum zone (OMZ). Since the term “island-mass effect” (IME) for the increase in plankton biomass around oceanic islands was proposed, the study of productive processes in these ecosystems has gained importance. The physical and biogeochemical mechanisms involved in this phenomenon are varied and related to upwelling, vertical mixing, internal waves, eddies and filaments, benthic nutrient regeneration, and river run-off. These processes are known to affect the distribution of nutrients, chlorophyll, primary and secondary production and may also shape the depth and intensity of the OMZ, in turn affecting the distribution of pelagic organisms. The main objective of this study is to determine the Cape Verde island mass effect across trophic levels to obtain a mathematical description of the distance effect. I hypothesize that atmospheric dust input (nutrients, iron) might dampen the effect compared to e.g. central Pacific islands where the IME occurs in a marine desert without substantial atmospheric nutrient input. To identify the proximate drivers of the IME, zooplankton samples and echosounder data were collected around the Cape Verde Islands during the CCLME Ecosystem Survey onboard of R/V Fridtjof Nansen from June 04 to 20 in 2011. Furthermore, zooplankton samples collected on the open ocean Cape Verde time series station CVOO and off the west coast of Africa aboard the R/V Thalassa, where zooplankton biomass was higher inshore compared to the offshore stations, as well as satellite and glider data were used to compare the local patterns.

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