

Carbon flows through the pelagic food web in the southern Chilean Patagonia.

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Thus, the hybrid mixture of terrestrial and oceanic environments inside fjord and channels affect the physical structure of the water column setting a strong haline stratification. In addition, the input of particulate and dissolve organic and inorganic matter impinge on the structure and functioning of the pelagic and benthic ecosystems in the southern Patagonia. The objectives of this study were (1) to study the overall biological, chemical and physical characteristics of the southern Patagonia region, (2) to assess the concentration, provenance (allochthonous versus autochthonous) and distribution of the POC and DOC pools and (3) to study the carbon export towards the sediments and its flow through the pelagic food webs will be assayed (with emphasis in the dominant euphausiid species *E. vallentini*) in the subantarctic region of the Chilean Patagonia. The trophic role of *E. vallentini* did not differ from its congeneric species of the Humboldt Current System of the Eastern South Pacific (*E. mucronata*) or the Southern Ocean (*E. superba*) sharing the condition of “key species” because they constitute (1) the main carbon and energy flow from lower to higher trophic levels, feeding mainly on heterotrophic preys (2) the main POC flux to deeper layer of the ocean through their active vertical migration and passive fecal-carbon export.