

How does Anthropogenic Carbon move through the ocean?

The ocean can take up Anthropogenic Carbon. The Anthropogenic Carbon uptake of the ocean influences our climate. The amount of this uptake depends on how the ocean can transport Anthropogenic Carbon from the surface to the deep ocean, where the Anthropogenic Carbon can be stored.

In this study, we used the output of a numerical climate model to study and quantify different ways by which Anthropogenic Carbon is transported from the surface to the deep ocean. We find that, due to a mixture of processes, there is an accumulation of Anthropogenic Carbon at about 40°S, at about 500-1000 meters depth. This raises questions about processes such as “Cabbeling” that may limit the further distribution of Anthropogenic Carbon into the deep ocean. Over all, the transports pathways of Anthropogenic Carbon from the surface to the deep ocean, as revealed in this study, contribute to a better understanding of the ocean's role in our climate system.