The Helmholtz Institute for Functional Marine Biodiversity (HIFMB) is a research institute located in Oldenburg. It studies marine biodiversity and its importance for the function of marine ecosystems, the people linked to those ecosystems, and their governance. In doing so, it develops the basis for marine nature conservation and management. The HIFMB was founded in 2017 and is an institutional cooperation between the Alfred Wegener Institute in Bremerhaven, Helmholtz Centre for Polar and Marine Research (AWI), and the Carl von Ossietzky University in Oldenburg linked to the Institute of Chemistry and Biology of the Marine Environment (ICBM) and Institute for Social Sciences (IfSol).

HIFMB Postdoc Cohort HIPP26:
The dilemma of the Southern Ocean: Ecosystems, sustainability and competing interests at the edge of the world
(full-time, 3 years, Oldenburg/ Germany)

Background: Antarctica is often called the world's last great wilderness, surrounded by a so-called 'pristine' ocean that harbours a highly diverse fauna of invertebrates, fish, birds, and mammals. This Southern Ocean covers nearly 10% of the world's total ocean space. It is a habitat for over 10,000 known marine species. Politically, it is special in that the majority of the space represents Areas Beyond National Jurisdiction (ABNJ). This means that much of the Southern Ocean is, theoretically, open to all nations and has no national-level governance. The region is currently governed through the international Antarctic Treaty System (ATS), with the Southern Ocean under the remit of the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR). Today, Antarctica and its surrounding waters are experiencing an increasing intensity of commercial, scientific, and political developments. The Southern Ocean is no longer a remote region (if it ever was). Scientists, fishers, and tourists travel to Antarctica and its surrounding waters to explore it, and also, in some cases, to exploit it.

At the same time, the Southern Ocean, which plays a key role in regulating our climate through ocean currents, sea ice, and its ability to absorb heat and CO_2 from the atmosphere, is undergoing climate-related changes. It is not beyond the reach of human-induced changes to our planet. In recent decades, environmental changes such as rising atmospheric and oceanic temperatures, reduced sea ice extent, ice shelf thinning, glacier retreat, and increasing ocean acidification have been observed. Record values have been reported, such as in February 2023, when the lowest sea ice extent since satellite observations began in 1979 was recorded at just 2.01 million km. These environmental changes are having profound biological effects, including changes in primary production, community composition, and poleward shifts of species. Species that are endemic to the high southern latitudes and specially adapted to cold conditions are particularly vulnerable, as their habitats with optimal environmental conditions become increasingly scarce. All in all, these ongoing changes highlight the urgent need to rethink the management of this unique region, ensuring that it remains resilient in the face of both human pressures and climate change.

We invite applications for four positions, covering natural and social science perspectives, that will cohere around the 'dilemma' facing the Southern Ocean: how competing interests impact its governance, but also drive the need for greater science to understand its changes:

#1 Geopolitical dilemmas for management: transfer for governance

#2 Sustaining the keystone: Rethinking Antarctic krill fishery management under climate change

#3 Navigating uncertainty: Planning marine protected areas in a changing Southern Ocean

#4 Acoustic possibilities for Southern Ocean management dilemmas

Further info: https://hifmb.de/news/jobs/, open until **August 24, 2025**.