

RV SONNE Expedition SO-306
COWIO (Port Louis, 08.08.2024 – Durban, 09.09.2024)

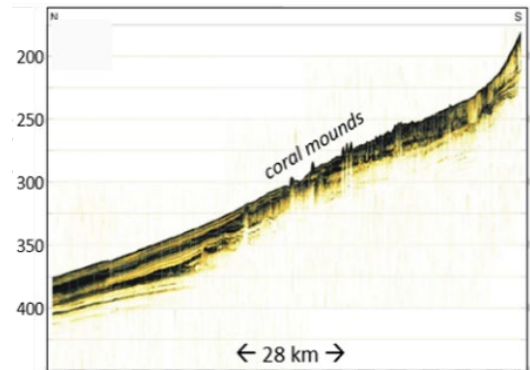
1. Weekly Report

Cold-water coral ecosystems in the southwest Indian Ocean are in the focus of expedition SO-306. Previous knowledge on the distribution and ecology of cold-water corals and their sensitivity to environmental change has mainly come from studies in the Atlantic. Little or no information is available for other regions, particularly the Indian Ocean. From our study area, which stretches from Madagascar to the East African continental slope, only a few incidental findings of cold-water corals and some survey data indicating seabed structures formed by cold-water corals are known. For example, hydroacoustic measurements obtained during the RV METEOR expedition M75-2 show typical mound structures on the sea floor, indicating so-called cold-water coral mounds consisting of a mixture of coral fragments and sediments. One of the main objectives of this expedition is to investigate these structures, both in terms of the recent status of cold-water coral ecosystems and their long-term geological development under changing environmental conditions.

To address these topics, the SONNE left Port Louis (Mauritius) on time on 8 August 2024 for expedition SO-306, which is organised by MARUM - Centre for Marine Environmental Sciences at the University of Bremen. On board are 37 scientists from research institutes in Germany, the Netherlands, Mozambique, Spain, South Africa, Tanzania and the USA. The first three days of the transit around the northern tip of Madagascar were accompanied by good weather conditions. These days were used by all the groups to set up their equipment and establish the laboratories on board. Sunday, the SONNE arrived in the first working area near the island of Mayotte, and the station work started with some equipment tests and calibration work for the multibeam echosounder system.



RV SONNE in the port of Port Louis
shortly before departure



Parasound-Data from expedition M75-2,
showing potential cold-water coral mounds
off Tanzania

Tomorrow we plan the first dive of the remotely operated vehicle ROV SQUID. Everyone on board is eager to see if the first pictures of the seabed will show us the cold-water coral reefs we are hoping for...

Best wishes from on board on behalf of all participants
Dierk Hebbeln