

M130, Mindelo – Recife

August 28th to October 3rd, 2016

1st Weekly Report, August 28th, 2016

METEOR cruise M130 started in Mindelo, Cape Verde, today. The research cruise is part of the collaborative research center (SFB) 754 „Climate - biogeochemistry interactions in the tropical ocean“ funded by the Deutsche Forschungsgemeinschaft and the BMBF cooperative project “Regional Atlantic circulation and global change” (RACE). A regional focus of the SFB 754 related physical-biogeochemical investigations is the oxygen minimum zone (OMZ) in the eastern tropical north Atlantic. The cruise related activities aims at advancing quantification of the oxygen budget in the oxygen minimum zone. Besides oxygen supply by mean advection, diapycnal and lateral eddy fluxes, we focus on advancing oxygen consumption estimates. Further objectives are investigating the role of zooplankton and its vertical migration for fluxes of particulate and dissolved matter to the OMZ as well as advancing quantitative understanding of nitrogen fixation in the near surface layers of the tropical Atlantic. In the second part of the cruise in the region of the western tropical south Atlantic, investigations will focus on the variability of transport and water mass properties of the western boundary current off Brazil.

Before boarding METEOR yesterday a few of us were given the opportunity to visit the construction site of the Ocean Science Centre Mindelo (OSCM, Fig. 1). The OSCM is a joint effort of the Cape Verdean Instituto Nacional de Desenvolvimento das Pescas (INDP) in Mindelo and GEOMAR Helmholtz-Center for Ocean Research Kiel. The building will serve as a scientific and logistic platform for marine and atmospheric research off western Africa. We were very impressed by extend and the development of the building.



Fig. 1: Construction site of the Ocean Science Centre Mindelo (Photo: Björn Fiedler)

The measurement program should have started today shortly after leaving port with the recovery of the CVOO (Cape Verde Ocean Observatory) mooring. We have spent the last 2 days setting set-up our equipment in the laboratories and preparing our instruments. However, due to a late arrival of one of our containers carrying dangerous good, we were forced to stay in the harbor for an additional day. Despite sending the delayed container along with 6 other containers ahead of schedule, it missed three departures for not fully resolved reasons but made the final freighter for a timely arrival in Mindelo. Due to engine problems during the passage, the arrival of that freighter was delayed by nearly two days and finally entered the harbor of Mindelo today at 16:00 local time. After custom procedures, the container is scheduled to be uploaded to METEOR tomorrow at 8:00.

We are anxious to get underway to the CVOO station after loading the remaining container at 10:00 tomorrow morning.

Best regards from the tropical north Atlantic
Marcus Dengler and the participants of the M130 cruise