

FS Maria S. Merian, Cruise MSM 79

Weekly Report 2

**Edinburgh (UK) - Las Palmas (Gran Canaria, ES) - Mindelo (Kap Verde)
30.10.2018 - 09.11.2018 - 06.12.18**



In the second week of research cruise MSM 79, we completed the EUROTHAWs program in the Bay of Biscay and started a transit towards the south. After a short stay in Las Palmas, where the scientific team was completed, we traveled further to Cape Blanc (off northwest Africa), where the work of LEG 2, MACPEI is planned. There we hope to arrive in the early morning of 12.11.2018.

The planned research in this area focuses on the production, input, distribution, decomposition and deposition of carbon to and on the ocean floor. The aim is to investigate processes that determine the vertical flow of organic material (OM) and its changes in the water column of the Cape Blanc upwelling area off NW Africa. The scientific topics include a detailed investigation of phytoplankton succession, the formation as well as the vertical and lateral transport of particulate OM (POM) as a function of mineral dust and buoyancy. Furthermore we will investigate the degradation of POM under different redox conditions. This includes for instance the molecular alteration of POM and lipid biomarkers in the water column and the resulting influence on palaeoceanographic proxies.

The first activity in the research area will be the maintenance of long-term mooring stations that include a the dust collector and sediment traps off Cape Blanc. Furthermore we will start water column studies along a transect that runs from the coast to the open ocean (Figure 1).

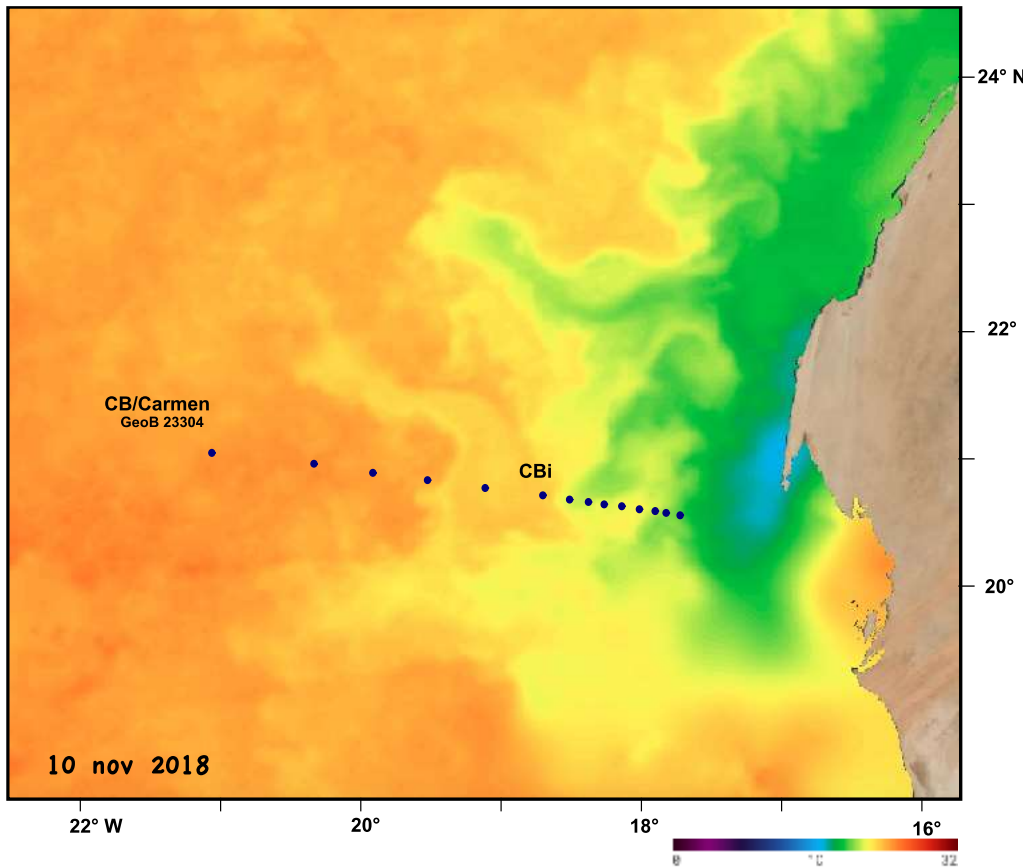


Figure 1. Map depicting the current sea surface temperatures in the research area (source: NOAA-state of the Ocean) Low temperatures (blue and green colors) represent the distribution of freshly upwelled waters. The map furthermore depicts the planned research stations along a transect that runs from the coast to the open ocean as well as the position of the Sediment traps "CB" and "CBI" and the dust collector "Carmen".