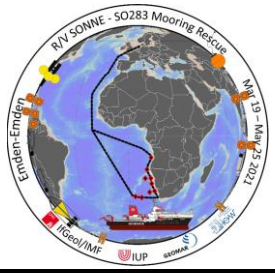
R/V SONNE

SO283 "Mooring Rescue"

Emden - Emden, 19.03. - 25.05.2021

6. Weekly Report

19. - 25.04.2021



Namibia - full work program

After we had successfully completed our work in South Africa, we set course directly for Walvis Bay, Namibia's largest port. Originally, no stopover was planned there. However, R/V SONNE had never been in Namibian waters before and had to be cleared in first. So we moored at the pier in Walvis Bay on 20.04.2021 at 09:35 board time. All the necessary formalities were completed during the day so that we could leave the pier again at 15:50 on the same day and started station work in Namibian waters.

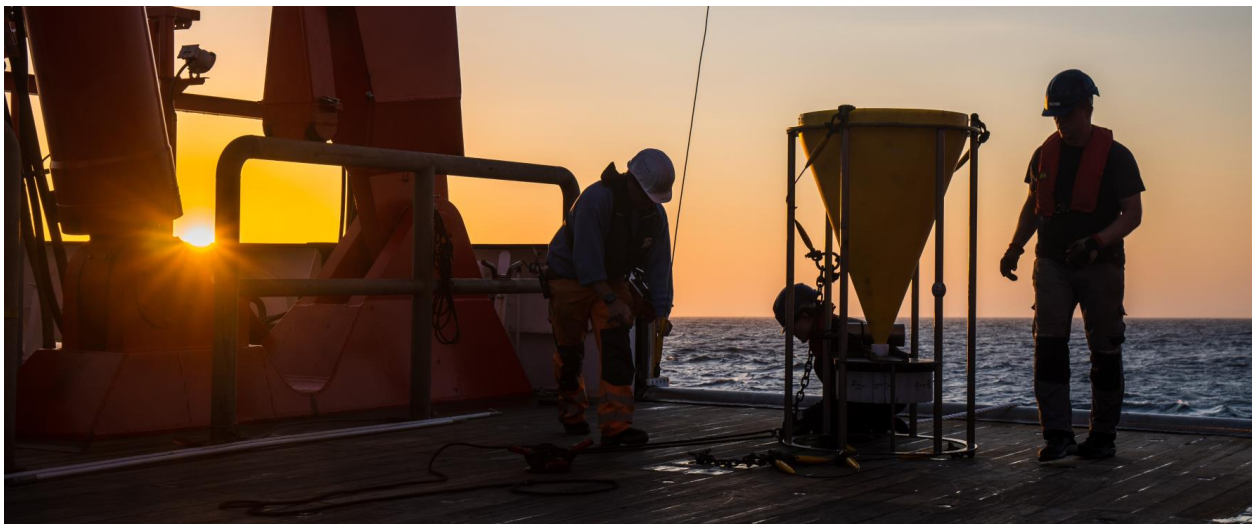
There was not enough daylight left for mooring work, so the night hours were used intensively for station work with CTD deployments and net catches. On the way to the western mooring WBST West-02, two drifter systems with various sediment trap bottles were set out before things got really exciting for the first time around noon on 21 April: Is the mooring system in 1900 m water depth still there after more than two years and can it be released? Yes, it responded immediately and released right at the first contact, so that a short time later the first buoyancy balls were sighted. However, it also quickly became clear that parts were missing, especially the top float with transmitter and light beacon. In the course of the day, the almost 1.7 km long mooring was then recovered and an inventory was made. It turned out that most likely due to fishing activities the top float, a buoyancy module and a CTD sensor had been torn off. In addition, it turned out that the sediment trap had not worked as intended due to motor damage. These are of course moments that also led to a certain disillusionment, as the data and samples for the TRAFFIC project were eagerly awaited. On the other hand, one had to be satisfied in the end that the remaining flotation modules had been sufficient to be able to recover the system at all and thus no total loss had to be lamented.

After everything had been checked and secured on deck, RV Sonne sailed to the next mooring system overnight. When we arrived at the mooring station on the morning of 22.04.2021, we were slowed down by thick clouds of fog. Because when you want to release moorings, nothing is worse than dense fog, since the system cannot be located and no one knows how the individual modules lie in the water. Around 07:30 board time, the fog lifted and the system could be released. It responded immediately and also came to the surface - but with a big surprise. Almost the entire system was completely covered with shells, star fish and other organisms during the more than two years of mooring time. It was a sight no one had expected. Nevertheless, all systems and sensors worked successfully and collected an important set of data and samples for the TRAFFIC project.

It is no coincidence that the Benguela upwelling area is a highly productive area: the WBST East-08 mooring almost completely covered with mussels and star fish (© University of Hamburg/Knut Heinatz).

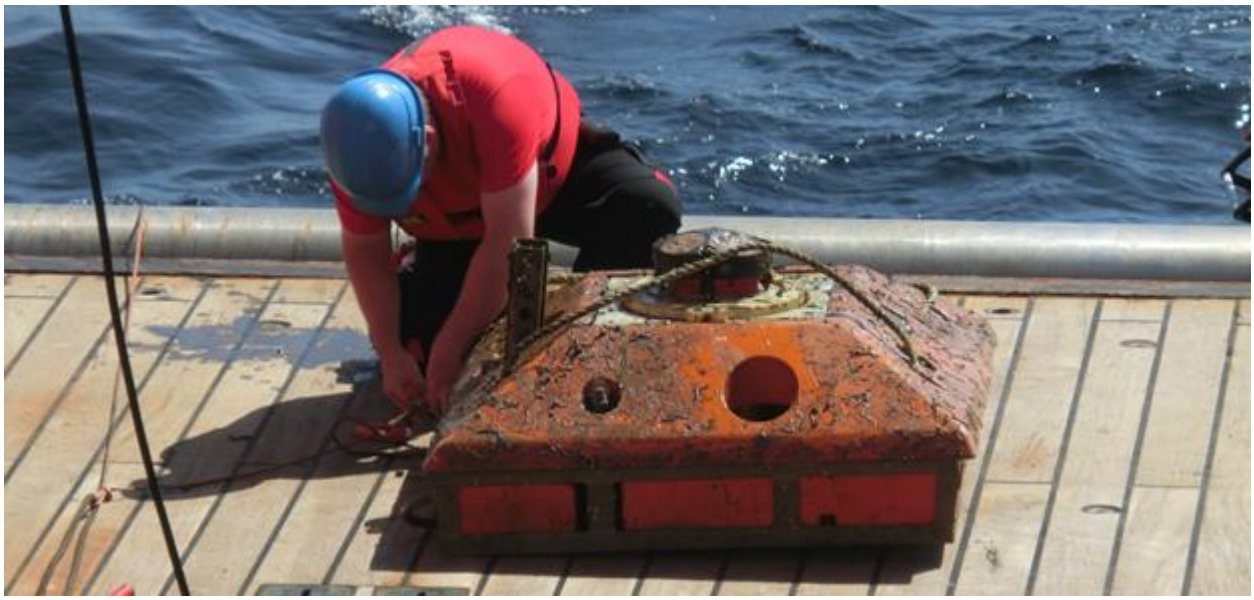
After the successful recovery, the first thing to do was to scrub the deck so that work could continue. The next mooring LTMB of the EVAR project was less than an hour away. Here, too, the acoustic release responded immediately, but nothing came to the surface, despite multiple pings. Fortunately, the system was equipped with an emergency trigger, which then also brought buoys to the surface. Still, something seemed strange. And it soon turned out what: large parts of the main system had been torn off. A total of 17 instruments and sensors were missing - a great loss of material and data. At least it was possible to establish certainty, which is very important for mooring work, so that the systems can be checked off. But these two systems also showed how urgent and important this rescue mission was.

On deck, everything was now counted, a general inventory was carried out and it was decided: all systems can be deployed again, which is of great importance for the individual projects. So in the afternoon of 22.04. WBST West-03 was deployed, before in the morning of 23.04. the systems LTMB and WBST East-09 could be successfully moored. All systems will be recovered during SO-285 in fall 2021. In the afternoon of 23.04., the drifters were successfully recovered before the transit towards 18°S began after a very labor-intensive day, in order to recover the next mooring there and to deploy a short-term drifter system.



Sunset on R/V SONNE: Last preparations before a sediment trap is safely moored in the water (© Heike Dugge/RV SONNE).

In the evening we were greeted by wind gusts of up to 8 Bft., but this did not prevent us from continuing our night station work with CTD deployments. The next mooring was already waiting for us on Sunday morning, 25 April. The Trawl Resistant Bottom Mount – also called the "turtle", had to be dredged several times in the past because squid had tampered with the ropes. Against our worries, however, the "turtle" immediately came to the surface and the whole system was on deck in less than an hour. We still collected the drifter in the afternoon, accompanied by a school of pilot whales, and are now heading to 25°S.



Sebastian Beier from IOW with his successfully recovered "turtle" (© Lahajnar / Uni Hamburg).

On board, everyone continues to work with great enthusiasm and sends greetings to those at home.

At sea, 25.04.2021

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