POS534 cruise to Goldeneye, North Sea (1.05.-29.05.2019)

4th weekly report

Aberdeen port authorities sent a warm welcome to RV Poseidon on 22nd of May. It is quite busy in the harbor as a major storm event forced numerous offshore supply vessels to hide there (Fig. 1). Same to us. After changing part of our scientific crew we had to stay near the coast until the 24th.

Fig. 1: Aberdeen harbor.

80 bumpy nautical miles later, we arrived in Goldeneye on the 25th with wind and waves calming down. We took this first chance to recover our ADCP-lander, which recorded current data, pH and CO_2 data of bottom water during the last 2 weeks. Recovery operation went smooth and the recovery rope was sorted on deck and tied up again for future lander deployment (Fig. 2).

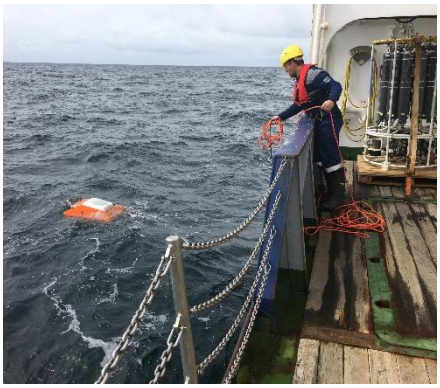

Fig. 2: a) Lander recovery;

b) RV Poseidons "Reeperbahn";

c) Ready for next deployment.

As weather was still improving during the 25th-26th of May we could conduct all of the planned gravity coring and Multi-corer stations at the CO_2-release site (Fig. 3). Of course after ROV ISIS and RRS James Cook had recovered all equipment from seafloor first (i.e. CO_2-tank, drill pipes, benthic lander, optodes, acoustic walls, etc.).

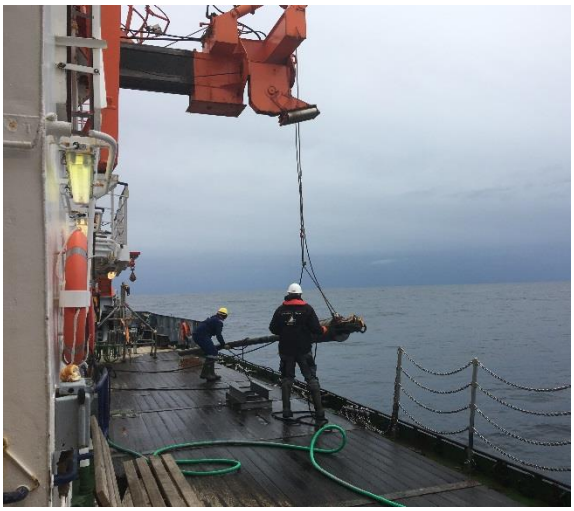

Fig. 3: a) Deployment of 5 m long gravity corer; b) Recovery of MUC, filled with sediment.

It is quite a challenge when using heavy gears to hit a spot of 7 m radius, which is the area where CO_2 seeped out of the seafloor for about 2 weeks. Unfortunately, we had to leave the Goldeneye site before AUV surveys operated by RRS James Cook could verify our coring attempts. Nevertheless, pH-measurements in split cores (Fig. 4) should gave first indications if recovered sediment and porewater was altered by the released CO_2.


Fig. 4: Busy wet-lab scientists conducting sediment and porewater sampling.

Actually, we are on transit to Bremerhaven with an estimated time of arrival at 10 am on 29th of May. However, as weather was stable in the night of the 28th, we conducted a last Video-CTD and hydroacoustic station at “Figge Maar” in the German EEZ.

Greetings from onboard RV POSEIDON on behalf of the scientific crew,

Dr. Mark Schmidt (PI)