

## Final cruise report HE-493 (RiS-ID: 10701)

The purpose of this cruise (originally just a transfer leg) was to sample living benthic foraminifers and water, examine the metabolic balance of plankton communities and its consequences for the CO<sub>2</sub> gas exchanges with the atmosphere and to carry out multibeam analyses of the Røst reef.

Unfortunately, the *in situ* membrane inlet mass spectrometer (MIMS) to examine the metabolic balance of plankton communities was not ready and operational in time and was therefore not deployed. In addition, the scientist responsible for the multibeam analysis of the Røst reef could not participate for personal reasons. As a result, the scientific activity was reduced to collecting live benthic foraminifera using a multicorer only as well as continuous watersampling for the Thermosalinograph.

We left Longyearbyan at 11 AM on 18.08.2017 to arrive at our first station (78°29,2'N 8°30,2'E, 1396m) at 8AM on 19.08.2017 and successfully collect our first multicore sample. As the recovery was promising we decided to take a second sample at this station and skip the station scheduled at Haakon Mosby. Under excellent sea and weather conditions we took course on Bremerhaven where we will arrive on 25.08.2017 at 2PM.

Conform the rules of the Norwegian license a final report was e-mailed to:

- a) Norwegian Petroleum Directorate: [postboks@npd.no](mailto:postboks@npd.no)
- b) The directorate of Fisheries: [postmottak@fiskeridir.no](mailto:postmottak@fiskeridir.no)
- c) Norwegian armed forces: [csc@reitan.mil.no](mailto:csc@reitan.mil.no)

Results and conclusions (10.01.2017, 20.08.-28.08.2017, Jnr. 17/669):

There are no data *per se* but we successfully recovered 2 sediment samples using a multicore. Upon arrival at the AWI, the samples will be returned to *in situ* pressure in the laboratory for observation and description of deep sea benthic foraminiferal life cycles and behavior.