Expedition MSM145 ALONGate3
Reykjavik – Reykjavik
Weekly Report No. 2
02.08.2026 – 08.08.2026

"To achieve great things, you need two things:

a plan and not enough time"*

**Quote* (Leonard Bernstein)

Figure 1: The selected intact cold-water coral reef (composed of *Desmophyllum* and *Madrepora*) in the Londsjúp Trough; photo: ROV PHOCA. On the right, a second image taken during deployment and testing of the lighting settings; photo: ROV PHOCA.

What an exciting week! Based on the weather forecast, we had scheduled operations in the second working area (WA2) for Sunday morning. To ensure ideal deployment conditions for the second BLOS, we left WA1 on the evening of July 31, 2026, and were able to begin ROV dives in the Londsjúp Trough right on schedule on August 2, 2026. That was certainly the plan! Making the most of the weather window turned into a race against time... First, we retraced the path of the 2020 ROV dive (ROV7, IceAGE3, SO276) using the OFOS system to find an ideal deployment site for the BLOS via an "aerial view." We had previously identified six candidate sites for comparison based on existing imagery. Aiming for a 6-meter maneuvering radius for the ROV PHOCA, we pinpointed two potential locations, which were then investigated during a subsequent ROV dive. We used this reconnaissance dive simultaneously to collect biological reference samples for the BLOS positioning. These reference samples were supplemented by selected Van Veen grab samples to compare the sedimented areas between the individual reefs. Furthermore, a CTD and a multinet were deployed. The BLOS deployment dive followed on the morning of August 3, 2026. During the earlier OFOS dive, we had already encountered a "krillion" euphausiids—attracted by the light, the crustaceans swarmed like midges. Consequently, we worked on positioning the BLOS with visibility impaired, as its lights also attracted the swarms within seconds. Compounding these challenging conditions, the weather forecast urged us to work quickly to successfully complete the deployment. With a solid plan and limited time, we achieved a major milestone: the successful deployment of the second BLOS unit—modeled on the French design—comprising three components: 1) a Smoove camera, 2) a Custof2 recording unit including CTD, and 3) a power supply.

Figure 2: Left: the second BLOS positioned in front of an intact coral reef of *Desmophyllum* and *Madrepora* cold-water corals in the Londsjúp Trough; photo: OFOS: Lilian Böhringer. Right: the third BLOS in position in front of one of the chimneys at the Grímsey hydrothermal field; photo: ROV PHOCA.

During the transit to the next BLOS deployment site in the Grímsey hydrothermal field, the predicted wave height was once again the deciding factor for ROV dives. To secure optimal working conditions—much like we had done for WA2—we took the opportunity to conduct two OFOS dives in WA3 (the Langarnes fishing zone), an area originally scheduled for 2026: one dive within the fishing exclusion zone (established in 1976) and another outside it, in heavily fished waters. This timing allowed us to arrive perfectly at WA7 (Grímsey) on August 5, 2026, and begin the morning with an OFOS survey, followed by an ROV dive for exploration and biological sampling. A different area, but the same scenario played out: a closing weather window allowed for the successful deployment of the BLOS the following morning. However, the subsequent dive intended for further biological sampling had to be aborted. Nevertheless, thanks to the seamless collaboration between the crew and the scientific team, we managed to collect a sufficient number of push cores and sediment samples for faunal analysis.

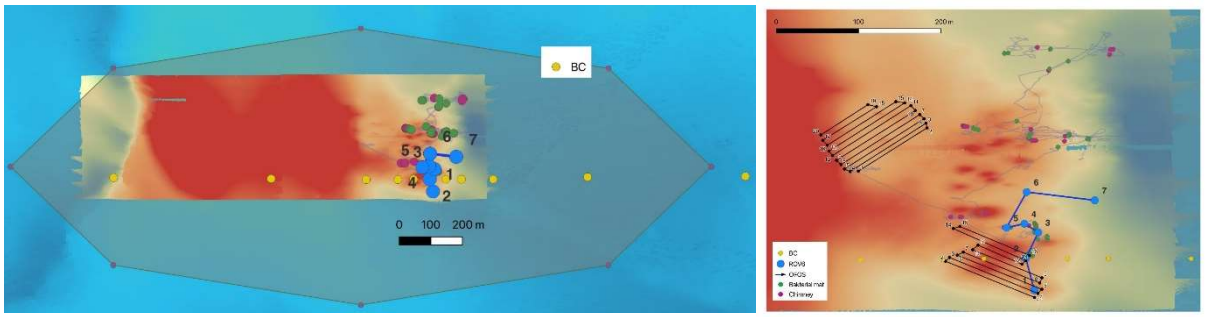

Figure 3: The planned ROV dive (No. 5) aims to explore a suitable "chimney," building on previous dives from 2021 (RV Pelagia, ROV PHOCA) and the OFOS planning conducted during this expedition. The detailed map shows the area within the fisheries protection zone that came into effect on August 1st, 2026.

We are currently experiencing winds of 6-7 Beaufort on a choppy transit northwards to our next study area off Greenland, the western end of the west-east transect planned in ALONGate, parallel to the AWI Garden Centre. Looking forward to exciting sampling, the scientific team sends greetings from aboard the M.S. Merian

08. August 2026, FS M.S. Merian

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