

## DSR/V SONNE Expedition SO247 SlamZ – Slide activity along the Hikurangi Margin, NZ



1. Weekly report: 21.03. – 27.03.2016

After seven successful weeks at sea, the German deep-sea research vessel SONNE arrived in Wellington Harbour. The scientists aboard voyage SO246 made use of the transit to New Zealand's capital city to pack up the scientific equipment and prepare the working laboratories for the next voyage. As the first 9 scientists of voyage SO247 arrived at the ship on Tuesday morning there were 11 containers on the pier with scientific equipment ready to be loaded on board. Among the equipment was the German seafloor drilling rig from Bremen, „MeBo 200“. With support from the crew and crane operator, all of the scientific equipment was able to be lifted on board and stored within two days; a total of 120 tonnes of scientific material and equipment has found its place on and under the ship's deck.

Despite this rather hectic period of work, the crew of the SONNE (and in particular the vessel's captain Oliver Meyer) found the time on Tuesday afternoon to invite on board and greet New Zealand's minister of business, innovation and employment Steven Joyce, as well as the German ambassador Dr. Anne-Marie Schleich. Both were visibly impressed by the technology and diverse research capabilities the ship offers.



*Fig1: Dr Anne-Marie Schleich, Captain Meyer und NZ's minister Steven Joyce (from left).*

On Thursday afternoon, a crowd of approximately 90 guests were invited to a special reception on board DSR/V SONNE by Dr Schleich together with Captain Meyer.

After several interesting presentations that gave insight into German-New Zealand marine research collaborations, the guests were able to get to know the vessel better during a guided tour of the ship. NZ colleagues from universities, research institutes and the ministry were also suitably impressed. Within the next five years there are already at least five approved expeditions in New Zealand waters where German, New Zealand and international scientists will, collectively, spend more than 220 days investigating various research questions.

On Friday a total of 39 scientists met at the SONNE, with participants from MARUM, the Universities of Jena and Bremen, and the New Zealand-based research institutes NIWA and GNS Science. By Saturday afternoon the labs were set up and boxes were stowed away, and with the final arrival of some New Zealand students the process of boarding the ship was completed.

Sunday afternoon saw the first major operation, with MeBo 200 being deployed into the water for a harbour test. Major aim of the upcoming cruise will be to investigate distinct submarine landslides utilizing MeBo sediment cores. These data will enable to gain a deeper insight into potential trigger mechanisms, ages of slid masses as well as slide mobility. Therefore, geochemical, sedimentological, mineralogical, as well as geotechnical samples will be collected directly on board.

In addition, hydro-acoustic data and in-situ heat flow measurements will be conducted. These will shed light on one hand on the internal structures of distinct slid bodies as well as on the other hand on the thermal structure of the Hikurangi margin.



*Fig.2: MeBo200 harbour test.*

A thorough test of all systems showed the system to be fully operational. Around midday we set sail under the heat of the sun and a light breeze with the hope of continued good weather for our first working area at the Tuaheni Landslides further north on the margin.

At this point we would like to thank the entire crew of DSRV SONNE for their warm welcome on board and for their excellent support with setting up equipment.

On behalf of all on board SO247, greetings from

Katrin Huhn & Nina Kukowski