Preliminary conclusions from the 2012 joint Russian/Norwegian Expedition to Stepovogo fjord

The joint Russian/Norwegian expedition has fulfilled its main tasks with regard to the investigation of dumped objects and collection of environmental samples in the Stepovogo fjord area according to the planned scientific programme. Selected samples have already undergone preliminary analysis onboard during the expedition, while more detailed and accurate measurements will now be undertaken in Russia and Norway. A final report based on the findings of the joint Russian/Norwegian expedition will be published in the end of 2013.

The dumped nuclear submarine K-27 containing SNF (Spent Nuclear Fuel) and some containers with radioactive waste have been inspected with the use of an ROV (Remotely Operated Vehicle) equipped with a video camera and spectrometer.

Video pictures show that the submarine lies upright on the seabed and clear of bottom sediments. No corrosion damage of the outer hull was visible, but a few hatches in the outer hull were missing. The deck of the submarine is covered in a 3-5 cm layer of silt sediments and benthic organisms were observed growing on the submarine.

Several sites with dumped containers were observed with the side scan sonar in the inner part of Stepovogo fjord. One of these was chosen for visual investigation with the ROV. Video pictures from the containers show that they are intact.

Preliminary results of onboard Cs-137 measurements on surface sediments and water samples showed that the level of contamination in the investigated area was generally low. However, slightly enhanced levels of Cs-137 in bottom sea water and sediment samples collected in the container area in the inner part of the fjord were found. Measurements from the outer part, including the K-27 dumping area show that no leakage has occurred from the submarine.

A similar picture for the level of radioactive contamination in Stepovogo Fjord was observed in the first joint Russian/Norwegian expedition in 1993-94. Very preliminary results reveal levels of radioactive contamination not higher than 20 years ago.