

1. Background

The joint Norwegian-Russian ecosystem survey of the Barents Sea is a cooperative endeavour that has been conducted in August through October since 2003 by the Institute of Marine Research (IMR), Norway and the Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO). The annual survey covers the ice-free area of the Barents Sea and the Svalbard shelf. Four (or occasionally five) vessels operate in the region: three Norwegian vessels and one or two Russian vessels. Many aspects of the Barents Sea ecosystem are monitored, such as: the physical and chemical oceanography conditions, which include pollution measurements and observations; phytoplankton, zooplankton, benthic invertebrates, and fish (juveniles to adults) populations; and lastly, sightings of sea mammals and birds are recorded. Monitoring is accomplished using different observation methods, including echo sounders, video and visual observations, and a variety of sampling gears that include: CTDs for taking water samples; plankton nets and a pelagic macro-plankton trawl for sampling plankton; pelagic and demersal trawls for sampling fish, invertebrates, and macro benthos; grabs and sledges to collect benthos samples.

Sampling Manual

A description of the overall survey design and sampling procedures, the sampling gears employed and the sampling protocols are in the “Sampling Manual” for the Joint Annual Norwegian-Russian Ecosystem Survey in the Barents Sea. In addition, the manual describes the methods that are used to estimate or describe various ecosystem characteristics of interest, such as biota abundance and biomass. The “Sampling Manual” has been continuously updated by experts from IMR and PINRO starting in 2004, and since 2012 it has been posted on the Ecosystem Survey web site.

Annual Technical and Survey Reports

A "Technical Report" will be issued annually to report and catalogue any deviations from the standard sampling protocols as described in the "Sampling Manual". During a standard monitoring survey, various experiments and studies are usually embedded in the survey. A description of these special investigations and their results will be reported in an annual "Technical Report".

Finally, all the results obtained during each research survey are presented annually in a "Survey Report". The "Survey Report" series, which was started in 2004, can be found at: http://www.imr.no/tokt/okosystemtokt_i_barentshavet/toktrapporter/nb-no.

Survey Focus

We are continuously studying ways to increase overall survey efficiency and to improve the accuracy and quality of the various survey outputs. This is being implemented by:

- Data management: data organization, including quality controls.
- Expertise building: continuous training and education of survey personnel.
- Scientific focus: every three years conduct a symposium that will focus on themes that evaluate the effectiveness of the survey for monitoring the important characteristics of the Barents Sea ecosystem.