1. BACKGROUND

The 10th joint Barents Sea autumn ecosystem survey (BESS) was carried out during the period from 9th August to 31st October 2013. The state of the ecosystem of the Barents Sea and adjacent waters was observed during the survey.

The survey plan and tasks were agreed upon at the annual IMR-PINRO Meeting in March 2013 and the joint collaborative tasks were executed with only small deviations from this plan.

Research vessel tracks during the 2013 ecosystem survey are shown in Figure 1.1. Trawl, hydrography and plankton stations are shown in Figures 1.2 and 1.3.

At the beginning of the survey (14.08-21.08), the research vessel "Johan Hjort" carried out two oceanographic sections (Bear Island–West and Fugløya–Bear Island) and the special investigation on inter-calibration of plankton nets (Juday and WP2). The inter-calibration was conducted on 20th August 2013 in a fjord of the west part of Spitsbergen (78°07'N and 13°12'E) over a depth of 250 m. At the end of the survey (27.09-01.10), "Johan Hjort" conducted the special investigation on the trials of inner net to reduce clogging of Harstad trawl-net by small fish. Reports from these special investigations will be presented later on the website (http://www.imr.no/tokt/okosystemtokt_i_barentshavet/nn-no). During 21.08-27.09 "Johan Hjort" worked in the central and northern Barents Sea within NEEZ executing ecosystem investigations and capelin survey.

The other two Norwegian research vessels "G.O. Sars" and "Helmer Hanssen" traditionally investigated the central and southern Barents Sea within NEEZ ("G.O. Sars", 24.08-17.09) and areas north of the Spitsbergen/Svalbard Archipelago ("Helmer Hanssen", 19.08-30.08).

Russian research vessel "Vilnyus" (09.08-01.11) began the ecosystem survey in the southeastern Barents Sea and then continued to cover the REEZ from south to north. A large area in the REEZ was closed for sailing due to military activity in the second part of August. It led to the loss of time and violation of the survey synopticity. Moreover "Vilnyus" lost some time because of bunkering with fuel. This caused the late beginning of capelin investigations and receiving results for capelin stock assessment only in mid-October. Such late receipt of the data for capelin caused problems for the assessment and management process, and it is important to avoid such a situation in the future.In October, "Vilnyus" investigated the northern Kara Sea and areas north of Franz Josef Land.

In 2013, the total number of vessel-days spent on the survey was higher than in 2012 (178 vs 154) because "Vilnyus" had moredays. But most of these extra-days were spent in bunkering and time loss during the military activity. So the number of working days the 2013 survey was approximately the same as in 2012. But the surveyed area in 2013 was larger than in the previous year due to the investigations in the northern Kara Sea and areas north of Franz Josef Land.

In general, all the tasks have been completed, and the weather conditions were favorable for the work.

This report covers most of the survey aspects but not all of them. The content will be updated and available on the Internet (www.imr.no). A website dedicated to collating all information

from the ecosystem survey including all the previous reports, maps, etc. is currently under preparation (http://www.imr.no/tokt/okosystemtokt_i_barentshavet/nn-no). Post-survey information which is not included in the written report may also be found at this website.

The scientists and technicians taking part in the survey onboard the research vessels and executing an enormous work on data collection are listed in Appendix 1.

Special thanks to the crews of the research vessels "Helmer Hanssen", "Johan Hjort", "G.O.Sars" and "Vilnyus" for ensuring the investigations and good work.

We thank Alexander Trofimov, Nikolay Ushakov and Irina Prokopchuk for helpful remarks and help with translation into English.

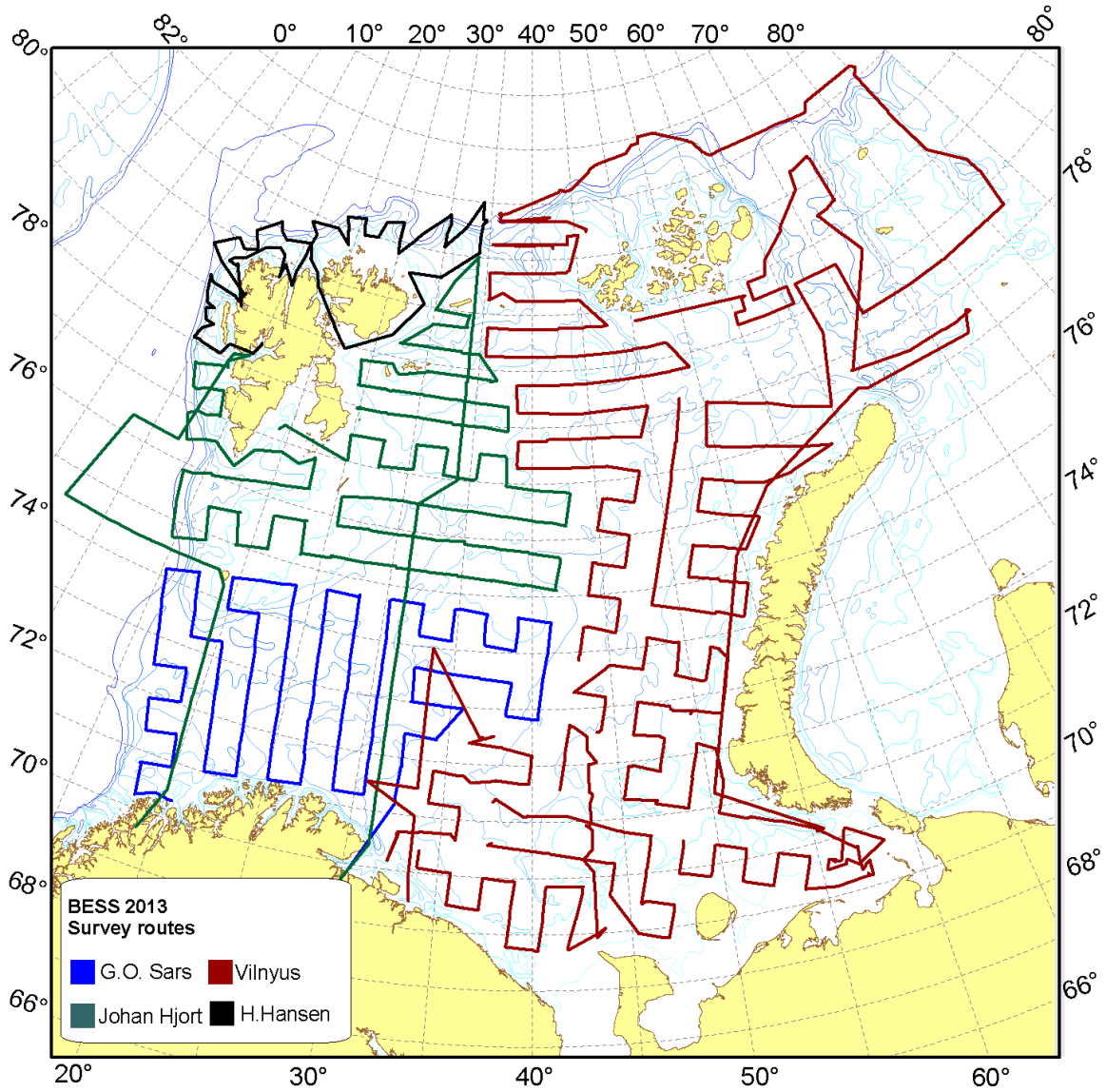

Figure 1.1 Ecosystem survey, August-October 2013. Research vessel tracks

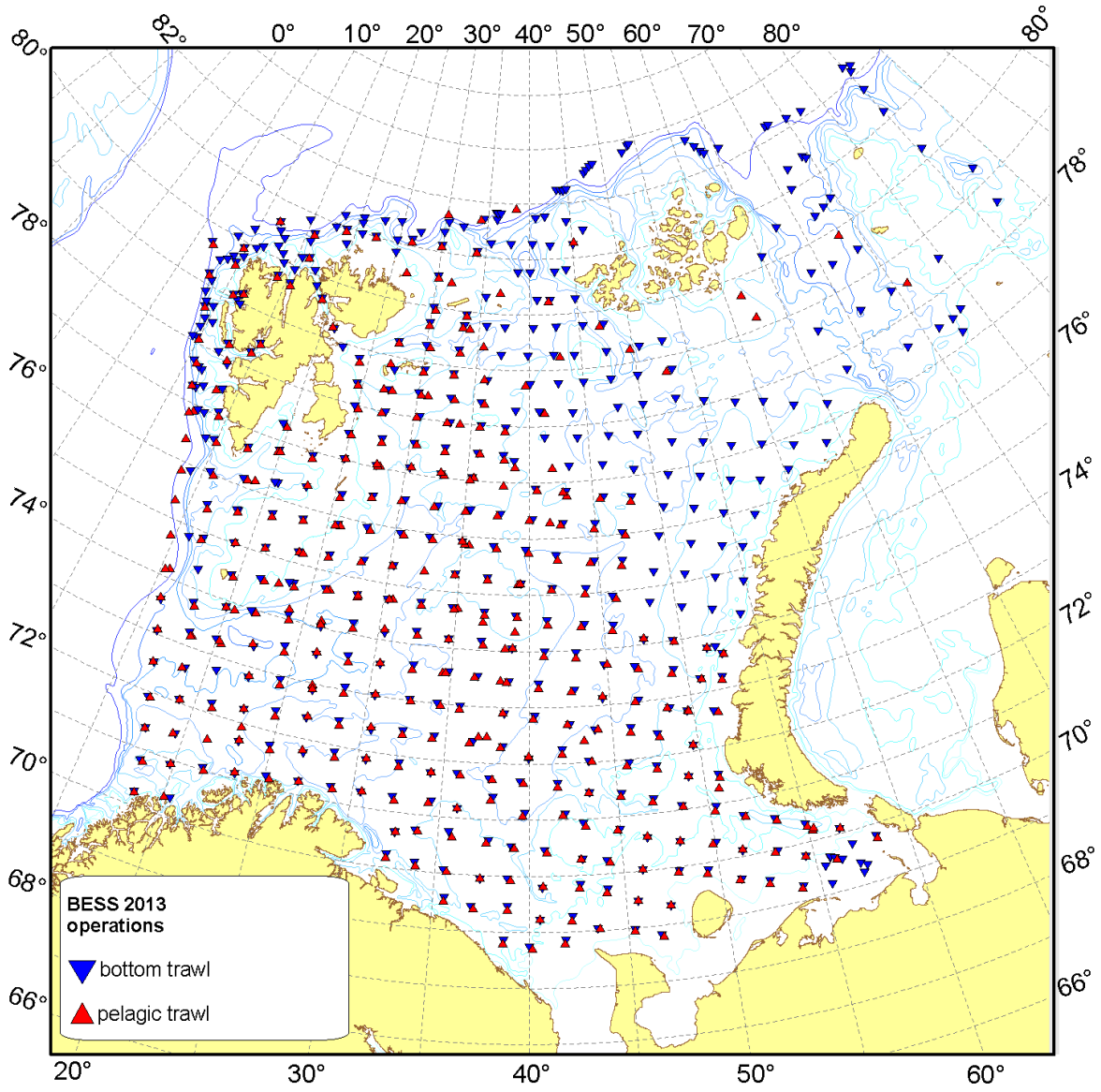

Figure 1.2 Ecosystem survey, August-October 2013. Trawl stations

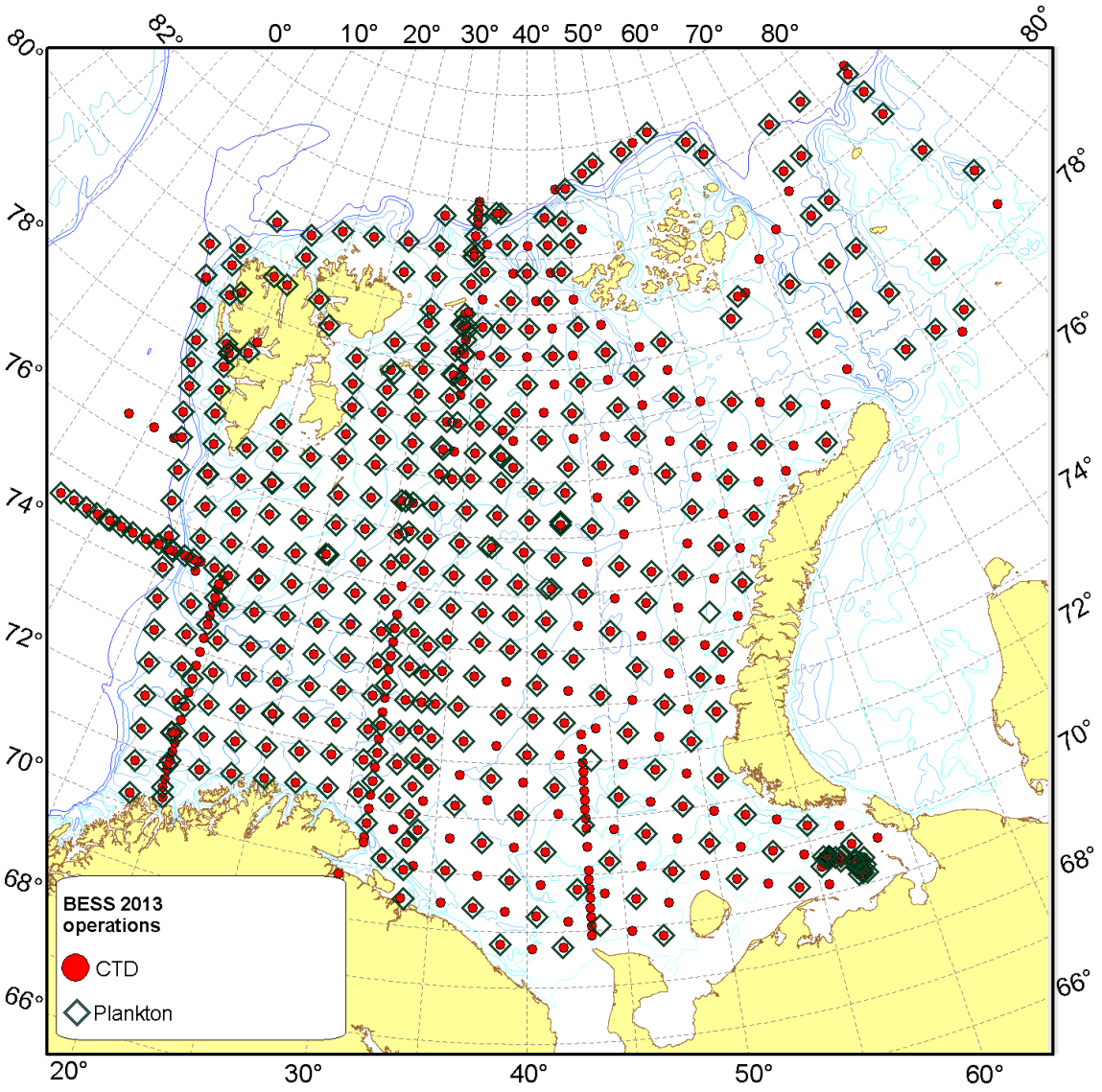

Figure 1.3 Ecosystem survey, August-October 2013. Hydrography and plankton stations