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**A short preliminary report on the Research Survey A7-2015 on R/V Arni Friðriksson,  
TFNA (Iceland)**

**The Icelandic and Greenlandic part of the International  
Ecosystem Summer Survey in Nordic Seas (IESSNS),  
6 July – 10 August 2015**

*Part of the joint Northeast Atlantic Pelagic Ecosystem Surveys in 2015  
(see ICES WGIPS report, January 2016)*

**By**  
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Vessel: R/V Arni Fridriksson, TFNA (Iceland)

Captain: Guðmundur Bjarnason (first part) and Kristján Finnson (latter part)

Cruise leaders: Sigurður Þ. Jónsson (first part) and Guðmundur J. Óskarsson (latter part)

The survey is a part of an annual international survey, International Ecosystem Summer Survey in Nordic Seas (IESSNS), governed by the ICES Working Group of International Pelagic Surveys (WGIPS). The main objectives are to explore: (1) through standardized surface trawling and acoustical measurements, the distribution and quantity of mackerel, Norwegian spring-spawning herring and other pelagic fish stocks; and (2) hydrographical- and zooplankton communities' conditions. RV Arni Friðriksson departed from Reykjavik on the 6 July. The survey followed a stratified sampling procedure (Figure 1) where location of transects and sampling stations was predefined. The first transect and station undertaken was southwest of Iceland and then the survey continued anti-clock wise around Iceland. From the southernmost transect in west Iceland strata, on 30<sup>th</sup> July at 3:30 am, the vessel entered into Greenlandic strata and stayed there for 12 days doing the research. The vessel was back in Reykjavik on the 10 August.

The main results shows that mackerel was located further south in the area south of Iceland than projected from results in this survey from previous years. Mackerel was caught in 70 of the total 92 standardized surface trawl hauls. The highest density of mackerel was also in this strata south of Iceland. Mackerel was, as in recent years, caught on almost all stations east and west of Iceland, while only at one none station in the strata north of Iceland (i.e. northwest of Iceland). The distribution of mackerel had an overlap with Norwegian-spring spawning herring east and northeast of Iceland, and with Icelandic summer-spawning herring in coastal waters south of Iceland and on the continental shelf west of Iceland. The mackerel catches Greenlandic waters indicated less density and more patchiness than in recent years. The zero line of mackerel distribution was considered to have been reached towards south, north and west in Icelandic waters, and probably also in all directions in Greenlandic waters, or close to it. The abundance index for mackerel went up in Icelandic waters while down in Greenlandic waters in comparison to previous year. The Norwegian spring-spawning herring was widely distributed southeast, east and north of Iceland. The highest density as represented both by the acoustic and trawl catches was in the southern part of the area east of Iceland and in a belt north of Iceland.

The upper layer (< 20 m depth) was 1-2°C colder in 2015 compared to 2014 more or less throughout the surveyed area. In comparison to the average temperature over last 20 years, the temperature in the surface layer (SST) was 1-2°C warmer in July 2015 in the area from north Iceland over Jan Mayen and to Svalbard. In the central and eastern part of the Norwegian Sea the SST was close to the 20 year average. South of the Greenland-Scotland ridge the SST was about 1 °C lower than the 20 year average.

Further details about the survey can be found in: Nøttestad, L., Anthonypillai, V., Tangen, Ø., Utne, K.R., Óskarsson, G.J., Jónsson S., Homrum, E., Smith, L., Jacobsen, J.A. and Jansen, T. 2015. Cruise report from the International Ecosystem Summer Survey in the Nordic Seas (IESSNS) with M/V "Brennholm", M/V "Eros", M/V "Christian í Grótinum" and R/V "Arni Friðriksson", 1 July - 10 August 2015. Working Document to ICES Working Group on Widely Distributed Stocks (WGWIDE), AZTI-Tecnalia, Pasaia, Spain, 25 – 31 August 2015. 47 pp.

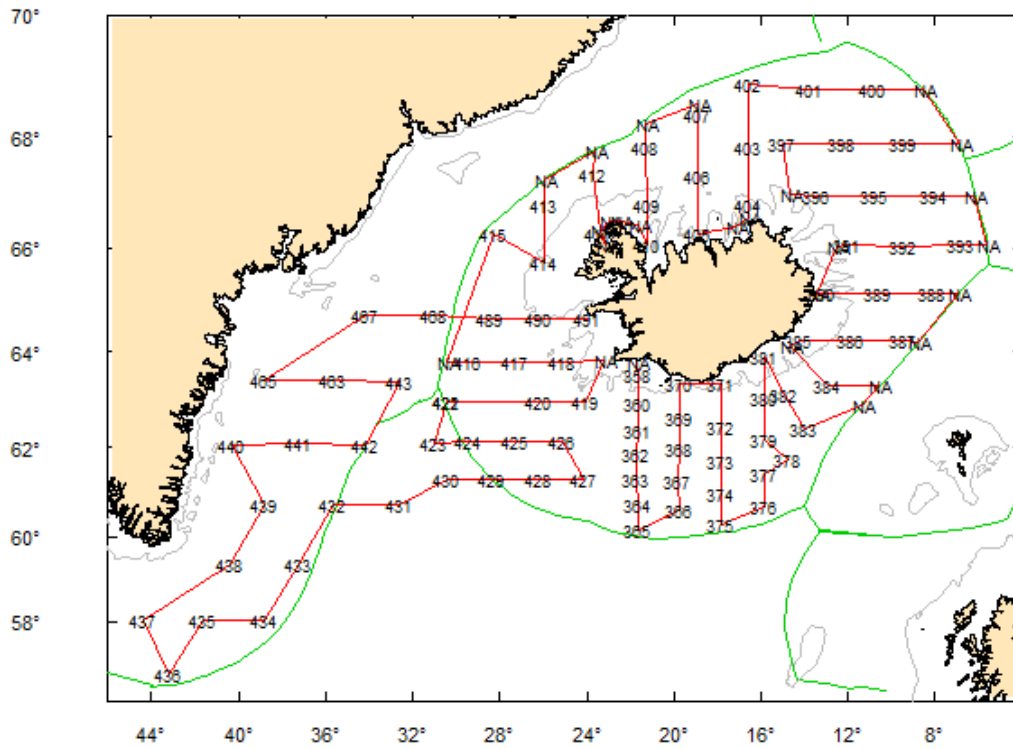


Figure 1. Location of the trawl/CTD/WP-2 stations (shown with the station number) along the survey tracks in the International Ecosystem summer survey in Nordic Seas (IESSNS) in July/August 2015 on RV Árne Friðriksson.