

WG members responsible for acoustic surveys in the North Sea have agreed, as part of their sampling regime, to try to photograph otoliths for use during the surveys for otolith structure and provide subsamples of these otoliths for microstructure calibration. During the spring of 2013, the survey coordinator in cooperation with HAWG and DTU-Aqua will distribute a detailed description of the sampling required. It should be done as an experiment in 2013 and 2014

As the new WGIPS has to deal with a large number of surveys and has a limited time available to achieve this, it is recommended that a two day post cruise meeting should be established, just before the WGIPS meeting in January 2014, to upload data to FishFrame and collate combined survey data. The meeting would allow WGIPS members to evaluate survey data and discuss issues arising from the surveys and conclude on recommendations to improve survey precision.

Malin Shelf surveys

The synoptic survey of the Malin Shelf metapopulation of herring has been carried out since 2008, with participating vessels from Scotland (chartered fishing vessel), Northern Ireland (RV "Corystes") and Ireland (RV "Celtic Explorer"). From 2011, due to financial restraints, the effort level has changed across participating countries. In 2013, neither the Scottish charter vessel survey (west of Scotland) nor the Northern Ireland coverage of VIaN/North Channel/Firth of Clyde will take place.

The provisional survey plan presented here does not provide survey coverage for the Clyde and North Channel area. The Scottish acoustic survey traditionally carried out in the northern North Sea by RV Scotia will continue to cover the northern area west of Scotland (north of 58°30'N) in 2013. Ireland has agreed to continue coverage south of 58°30'N to maintain the integrity of the Malin Shelf area, and the existing VIaN time-series. Transect spacing will be adjusted accordingly to account for the increased area coverage in 2013 and will be confirmed during the planning phase.

WGIPS, while acknowledging the difficult economic circumstances under which these decisions on survey effort are made, strongly recommends that survey effort and intensity should be maintained in its present form.

RV Celtic Explorer and RV Scotia will continue to collect photographs and otoliths to prepare for splitting the acoustic index into VIaN and VIaS stock components. WGIPS anticipates that HAWG will be able to provide results from this exercise in March 2013.

The results from the national acoustic surveys in June-July 2013 will be collated, and the results from the entire survey combined, at the next WGIPS in January 2014. Individual national survey results for sprat and herring should be uploaded to FishFrame no later than **30 November 2013**. This early deadline is to facilitate the planned WGIPS meeting in January 2014. Additionally, participants should be prepared to deliver their remaining raw data to the stage 1 module.

4.2.2 International blue whiting spawning stock survey (IBWSS)

Five vessels representing the Faroe Islands, the Netherlands (EU-coordinated), Ireland (EU-coordinated), Norway and Russia are scheduled to participate in the 2013 spawning stock survey.

Survey timing and design were discussed during the 2012 IBWSS post-cruise meeting. The group decided that in 2013, the survey design should follow the one used during the 2012 survey. The focus will be on a good coverage of the shelf slope in

areas II and III, as it is evident that the bulk of the spawning aggregation was found there during the past few years when the stock size was declining (2008–2011). On the other hand, during the first four years of the internationally coordinated survey (2004–2007), when the size of the stock was high, blue whiting aggregations were distributed more evenly over the whole survey area. The adapted survey design in 2012 attempted to take into account this shift in stock distribution. The design is based on variable transect spacing, ranging from 30 nm in areas containing less dense aggregation (e.g. subarea I, south Porcupine), to 7.5 nm in the core survey area (subarea III, Hebrides; Figure 4.2.2.1). From past surveys it was evident that huge areas in the west of the Rockall Trough contained, if at all, only sporadic and small blue whiting concentrations. The western borders of the transects in subarea III will therefore extend to just 11° W in order to put more effort on the continental slope. To avoid replication, transects were allocated systematically with a random start location.

The aim is to have all but the Faroese vessel start surveying in the north of subarea II (North Porcupine) at the time when the Norwegian vessel begins the survey there (27.03.2013; Table 4.2.2.1). That way, the core survey subarea III can be covered synoptically by 4 vessels with a similar temporal progression.

It was decided that the Dutch and Russian vessels would start the survey in the southern subareas I and II (Porcupine). The Irish Celtic Explorer would first cover subarea IV (on southwest Rockall Bank). 2–4 days after beginning their individual surveys, these vessels will join the Norwegian vessel surveying the north of subarea II and afterwards subarea III from the south progressing northwards. Once the Norwegian vessel has finished surveying subarea III, she will continue northwards into the Faroese-Shetland channel and continue coverage in a northeastern direction until time allows. The Faroese vessel will primarily survey subarea V (Faroese/Shetland) and join the other vessels in the north of area III once they are present there towards the end of the survey period. Survey extension in terms of coverage (52–61° N) will be in line with the time-series to ensure containment of the stock and survey timing will also remain fixed as in previous years.

Key will be to achieve coverage of area III in a consistent temporal progression between vessels. It is therefore very important that all 4 vessels covering the core Hebrides area are present on station in the north of subarea II (just north of Porcupine Bank) on 27 March 2013 (Table 4.2.2.1). Nonetheless, if some vessels are found to lack behind others, the tight 7.5 nm transect spacing will allow for adaptation of the survey design without great loss of coverage. For instance, this may mean either skipping or extending some of the horizontal transects to catch up or keep pace with the other vessels. Biological sampling should be carried out following methods normally applied to sampling acoustic registrations.

Preliminary cruise tracks for the 2013 survey are presented in Figure 4.2.2.1. As survey coordinator in 2013, Sascha Fässler (Netherlands) has been tasked with coordinating contact between participants prior to and during the survey. Detailed cruise lines for each ship will be circulated by the coordinator to the group as soon as final vessel availability and dates have been communicated (end of January 2013).

As the survey is planned with inter-vessel cooperation in mind it is vitally important that participants stick to the planned transect positioning to ensure that survey effort is evenly allocated and the situation observed in 2010 is not repeated.

Participants are also required to use the logbook system for recording course changes, CTD stations and fishing operations. An example format was circulated to participants at the January 2012 WGIPS meeting.

Table 4.2.2.1. Individual vessel dates for the 2013 International Blue Whiting Spawning stock Survey (IBWSS).

SHIP	NATION	ACTIVE SURVEY TIME (DAYS)	PRELIMINARY SURVEY DATES
G.O. Sars	Norway	17	27.3.2013 – 12.4.2013
Fridjof Nansen	Russia	19	23.3.2013 – 10.4.2013
Celtic Explorer	Ireland (EU)	19	23.3.2013 – 10.4.2013
Tridens	Netherlands (EU)	17	25.3.2013 – 10.4.2013
Magnus Heinason	Faroes	17	27.3.2013 – 12.4.2013

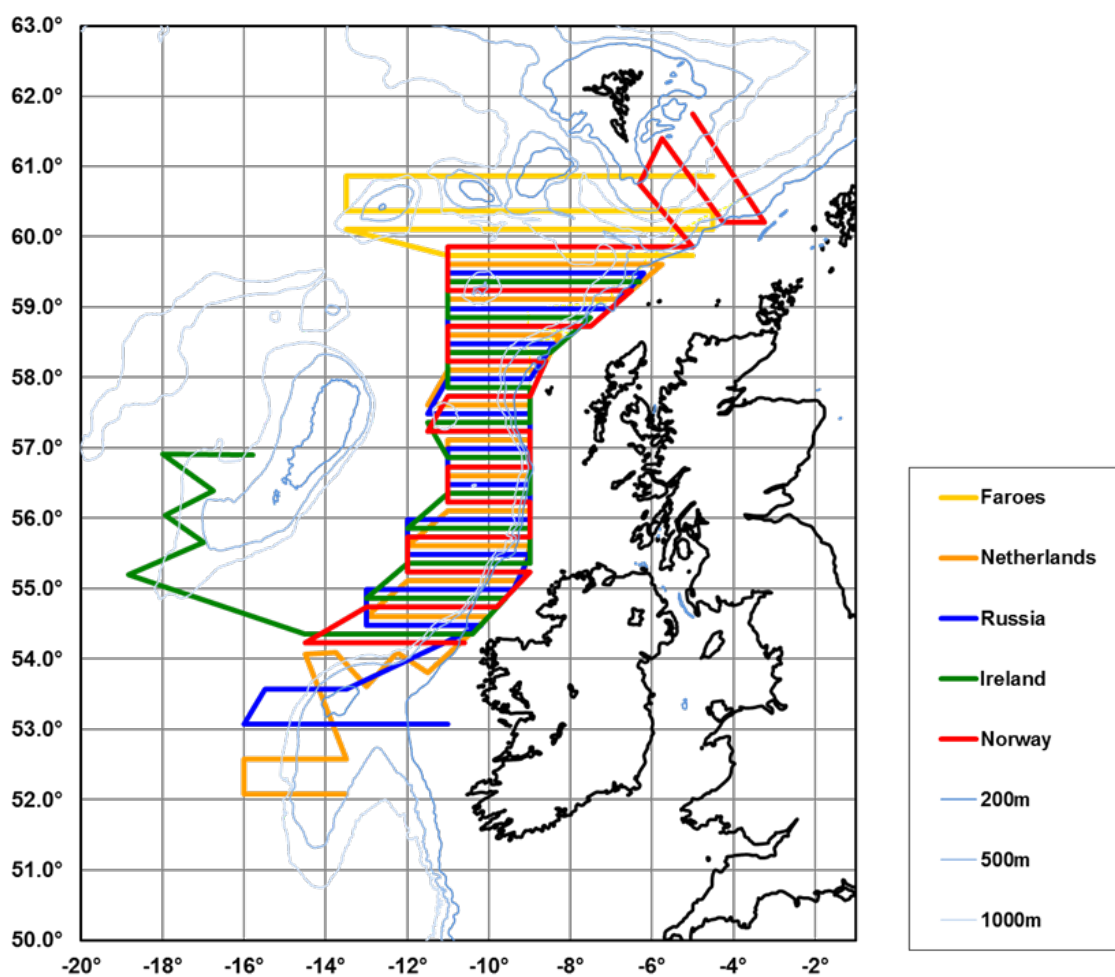


Figure 4.2.2.1. Planned survey tracks for the combined 2013 International Blue Whiting Spawning stock Survey (IBWSS).