

**SCIENTIFIC COUNCIL MEETING – FEBRUARY 2015****Scientific Council Subgroup on the Implications of Removing Fishery Surveys from VME Closed Areas**

Chair: Kathy Sosebee

Rapporteur: Neil Campbell

A subgroup of Scientific Council met by webex at 0800 AST on 11 February 2016 to further progress the work on removal of areas identified as vulnerable marine ecosystems in Article 2 of the NAFO Conservation and Enforcement Measures. The meeting was led by the SC Chair, Kathy Sosebee (USA) and attended by representatives from Canada and the European Union (Spain and Portugal) (Annex 1). The Scientific Council Coordinator, Neil Campbell, was also in attendance.

The chair welcomed participants, and the group adopted its agenda as circulated.

1. Review of terms of reference

The group began by considering the terms of reference discussed by Scientific Council during the 2015 Annual Meeting (SCS Doc.15/15), namely:

1. Develop list of stocks affected by closed areas and prioritize by degree of impact.
2. Examine impact of survey tows within the closed areas on VME species.
3. If the impact on VMEs is considered high, re-estimate survey indices for the stocks most impacted by the removal of the survey tows from closed areas and compare overall trends.
4. If there are any stocks with significant difference in trends, run the assessment model with the new survey indices.
5. Examine methods to deal with missing strata.

The group broadly supported these terms of reference. It was felt that the fifth term of reference is an issue which could be dealt with at a future date. Unless there are significant differences in trends there's no benefit from rerunning assessment models

It was noted that some work has been carried out on this topic for Canadian surveys in the Davis Strait, to be discussed at a forthcoming meeting, and it was felt that applying a consistent approach to surveys within the convention area would be beneficial.

As regards missing strata and the recalculation of survey indices, the Chair noted that a similar exercise is ongoing, re-stratifying the area of overlap between Canadian and US waters that was changed in 1987, and that they would endeavor to obtain and circulate further information on this to the group.

The group felt that changes in survey methodology would impact upon all stocks to some extent, but the degree of impact would be variable and would have to be assessed on a stock by stock basis. It was noted that in some cases the impact of survey hauls on VME indicator species can be high, with a catch of sponges in excess of 10 000 kg having been recorded in one tow.

2. Work done to date

The group discussed a working paper prepared by the Secretariat in 2015 calculating the proportion of each strata falling within VME areas in Div. 3M (see Table 1), and considered some work carried out on the proportion of hauls from the EU-Spanish survey which took place within current VME closures during 1988 – 2015. It was noted that strata in Beothuk knoll and in the deeper waters on the southeast of the Flemish Cap are no longer fished by the EU-Spanish survey.

Table 1. Area of Div. 3M survey strata falling within VME closures.

Strata ID	Area inside Closures (km ²)	Area of Strata (km ²)	Percentage
26	386	628	61%
32	356	726	49%
22	684	1555	44%
23	427	985	43%
18	318	787	40%
27	223	696	32%
25	208	821	25%
37	85	436	19%
36	55	351	16%
30	411	2745	15%
21	253	1833	14%
20	180	1423	13%
29	183	1740	11%
24	59	857	7%
17	79	2244	4%
35	41	1804	2%
31	74	3813	2%
33	7	377	2%
14	32	2125	2%
40	3	466	1%

3. Work to be completed

The group thanked the Secretariat for preparing this table, and requested a similar exercise be carried out for strata in Div. 3L and Div 3N. A shapefile of the stratification in these areas will be provided to the Secretariat for this purpose. Having identified the strata likely to be affected, the group agreed the next step would be to identify and flag up the numbers of hauls affected by strata by year, and to provide this information to Designated Experts and the people responsible for calculation of survey indices to consider the impacts of changing survey methods on their own stocks. This was felt to be an important step in mitigating the work required under ToR 4, which could be carried out only on stocks where there is a considerable year-to-year variability in affected hauls evident.

It was noted that if the decision is made to no longer conduct survey tows within VME closures, there may be a significant workload involved in editing the list of known good tow positions out of the lists from which positions are selected.

It was agreed that tables for the EU-Spanish Flemish Cap and Canadian surveys – similar to those presented for the EU-Spanish Div. 3L and 3N survey – would be created and considered by the group at their next meeting, before dissemination to Designated Experts. It was felt unlikely that recalculation of survey indices or rerunning of assessments is achievable by the June 2016 SC meeting.

4. Close

The chair thanked participants for their work, particularly those for whom it was very early in the day. It was agreed that a follow-up meeting would be held in advance of the June Scientific Council meeting, most likely in April, and that the Chair would organize a poll of participants to find the most convenient date. The meeting was adjourned at 0900 AST.

ANNEX 1. LIST OF PARTICIPANTS**CANADA**

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