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Our Ref: H.4/NH/AB/av 5 February 2020

Subject: Data call: VMS/Log book data for fishing activities in the North East Atlantic and Baltic Sea for the provision of ICES advice on the spatial distribution and impact of fisheries 2009 to 2019.

Dear Reader,

Please find enclosed a document describing the rationale, scope and technical details of this data call, as well as the secure use of data.

ICES advises on the environmental impacts of fishing and the use of space in the North East Atlantic and Baltic Sea. VMS data from vessels, coupled with log book data, is currently the most practical and cost-effective way to describe the spatial dynamics of fishing activities. This call reconciles the need for a rational approach to the cost of extracting and submitting the data by the states across the two regions. To continue ensuring anonymity and confidentiality of published data, a new field is included in the data call format (see 6.2 Format). Thus, VMS and logbook data from 2009 to 2019 is requested this year.

National data specialists are encouraged to consider attending ICES's working group of spatial fisheries data (WGSFD, 8 – 12 June 2020). In case of questions please contact the ICES Secretariat (data.call@ices.dk) for clarification.

Sincerely,

Anne Christine Brusendorff
General Secretary

CC: Roi Martinez (co-chair of WGSFD), Neil Campbell (co-chair of WGSFD), Darius Campbell (NEAFC), Kirill V. Kolonchin (VNIRO), Oleg A. Bulatov (Russian delegate to ICES), DG-MARE (EC).

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5 February 2020

Data call: VMS/Log book data for fishing activities in the North East Atlantic and Baltic Sea for the provision of ICES management advice on the spatial distribution and impact of fisheries 2009 to 2019.

1. Rationale of the Data call

The rationale for the call is that ICES advises on the environmental impacts of fishing and the use of space in the North East Atlantic and Baltic Sea. This call reconciles the need for a rational approach to the cost of extracting and submitting the data by the states across the two regions.

2. Scope of the Data call

VMS is currently the most practical and cost-effective way to describe the spatial dynamics of fishing activities. The scope of the Data call is VMS data from vessels, coupled with log book data on fishing activities from 2009 to 2019 of fleets in the ICES area.

3. Legal framework

Generically, all the governments and intergovernmental commissions requesting and receiving advice from ICES have signed international agreements under UNCLOS 1995 Fish Stocks agreement article 5 and 6 to incorporate fisheries impacts on other components of marine ecosystems and WSSD 2002 article 30 to implement an ecosystem approach in relation to oceans policy including fisheries. These agreements include an obligation to collect and share data on, inter alia, vessel position (UNCLOS FSA art 5) and to support assessment of the impacts of fisheries on non-target species and the environment (UNCLOS FSA art 6).

Specifically, ICES has a standing request from the European Commission to advise and inform on the impacts of fisheries on the ecosystem including marine mammals, seabirds and habitats impacts. This should include information on the location of habitats sensitive to particular fishing activities.

For EU Member States, this data call is under the DCF regulation ((EC) No 2017/1004 and Commission Decision 2016/1251/EU) and in particular, Article 17(3) of regulation (EC) No 2017/1004 which states "*..requests made by end-users of scientific data in order to serve as a basis* for *advice to fisheries management, Member States shall ensure that relevant detailed and aggregated data are updated and made available to the relevant end-users of scientific data within the deadlines set in the request,..*"

ICES is thus mandated to request VMS and logbook information to provide this advice. This mandate is supported by international agreements and the current EU data collection framework (DCF).

This Data call follows the principles of personal data protection, as referred to in paragraph (9) of the preamble in Council Regulation (EC) No 2017/1004.

4. Usage of requested data

ICES will use submitted VMS/Log book data to address the development of ICES advice addressing requests to describe fisheries activities and to evaluate the spatial and temporal effects of fishing, for example to describe fisheries activities in and in the vicinity of sensitive habitats (i.e. Vulnerable Marine Ecosystems, VMEs) and to map the aggregated distribution of fishing by different gear types.

5. Deadlines

The data should be submitted by 31 March 2020.

6. Data to report

6.1 Geographic and temporal scope

A new field has been added (see. 6.3 Electronic Advice outputs and appendix 1 and 2 for details). Thus, VMS anonymized data on fishing activities (all gears) from 2009 to 2019 of fleets in the ICES statistical areas (see link) is requested this year.
http://gis.ices.dk/geonetwork/srv/eng/catalog.search#/metadata/c784a0a3-752f-4b50-b02f-f225f6c815eb

6.2 Format

The data call asks for coupled VMS and logbook data that are anonymized.
Data for VMS combined with logbooks for 2009-2019 should be submitted in the new exchange format described in Appendix 1. Please note the addition of a new field, "Anonymized vessel identifiers", only for c-squares with 2 vessels or less. For c-squares where this field is not provided it will be assumed that 3 or more vessels are fishing. Alternatively, other self-describing formats that include information necessary to create the specified exchange format can be used. In addition, all vessel categories, anonymous vessel identifers, gear types and fishing activity should be submitted in the exchange format described in Appendix 2 – including the fishing activity already reported in Appendix 1.
Additional information and support on how to submit data is provided in a guidance document, if data submitters wish to use the VMSdatacall_proposedWorkflow.r developed by the ICES Working Group on Spatial Fisheries Data (WGSFD).
To support a high quality of the final advice, each national data submission will be analysed at the ICES Data Centre with the help of a standardized R-script, including calculation of summaries for the most important variables as well as maps to compare recent values with data submitted in previous years. A resulting Quality Check Report for each country will be checked by WGSFD, commented and sent back via the ICES Data Centre to the data provider. An audit trail of the data quality is tabulated and will be produced as an Annex to the WGSFD report 2020.

6.3 Electronic Advice outputs

The advice outputs based on data will result in electronic outputs. This means: in addition to the graphical images found in the advice, underlying information on

aggregated (all countries) spatial distribution of fishing effort will be presented in a form that will enable its use in spatial analysis to facilitate use of the advice. Maps can be communicated to the advice recipient as pdf files, tables or shapefiles, where the aggregated data values are presented as one value/range of values per c-square per gear grouping per year. This information is provided as an integral part of the advice. The underlying data themselves will not be made available to other parties.

To ensure vessel anonymity, aggregated international effort values of any c-squares containing 2 vessels or less will, in general, not be published. To do this, a text string of anonymized vessel identifiers shall be included (see 6.2 Format) by data submitters to allow for detection of c-squares with 2 vessels or less when data are aggregated (all countries).

Data can be considered sensitive if the activities of individual vessels can be inferred from the data (ICES, 2019b). Some data values (e.g. swept area ratios, SAR) are not sensitive and can be published even if there are less than 3 vessels within the aggregation. For sensitive data (e.g. fishing hours, total value, or average kW), values from c-squares with 2 vessels or less will be classified into ranges that are wide enough so that individual vessels can not be identified. These new implementations reflect the latest work of the ICES Working Group on Spatial Fisheries Data (WGSFD) to develop new procedures to preserve anonymity (ICES, 2019a).

Data providers will have a review period to flag issues prior to the release of the requested data output.

6.4 Resolution

Data should be reported anonymised and aggregated in a grid of concise spatial query and representation system of 0.05 x 0.05 degree grid using the approach of C-square reference XXXX:XXX:XXX:X (see Rees, 2003).

6.5 Electronic submission

The data and any supporting information should be reported to the ICES secure website. Please contact data.call@ices.dk for a country specific login.

7. Secure usage of data

Regarding the transmission, storage and handling of data, we inform that ICES will provide a secure (https) folder, and a unique password for each country to upload their data to. The data will only be accessible by the technical staff in the Secretariat for the purposes of providing the data to the specific processes/working groups as named in the call.

In addition, ICES has an agreed VMS/logbook access and use policy for data resulting from this type of data call, which governs the process of who is given access and what they can do with the data. (ICES, 2019b)

8. Contact information

For support concerning submission issues, please contact data.call@ices.dk or the chairs of WGSFD (neil.campbell@gov.scot and roi.martinez@cefas.co.uk).

9. References

ICES. 2019a. Working Group on Spatial Fisheries Data (WGSFD). ICES Scientific Reports. 1:52. 144 pp. http://doi.org/10.17895/ices.pub.5648

ICES. 2019b: Conditions for detailed VMS/log book data use. http://doi.org/10.17895/ices.pub.5756.

ICES. 2019c. Guidelines for the VMSdatacall_proposedWorkflow.r. (ver. 2, 5 February 2019) http://doi.org/10.17895/ices.pub.4705

Rees, T. 2003. "C-square s", a new spatial indexing system and its applicability to the description of oceanographic datasets. Oceanography, 16(1), 11–19.

Appendix 1: Exchange format for combined VMS and logbook data

Order	Name	Type	Basic checks	Comments
1	Record type	String		Fixed value VE
2	Vessel Flag Country	String	Code list	ISO 3166-1 alpha-3 codes. The flag country of the vessel.
3	Year	Integer	Code list	1900 to 3000
4	Month	Integer	Code list	1 to 12
5	Number of distinct vessels	Integer	Code list	1 to 99 999
6	Anonymized vessel id*	String		Country code + 3 digits and semicolon separated. Example: ESP001; ESP003;
7	C-square	String	Code list	0.05x0.05 degree, C-square reference XXXX:XXX:XXX:X
8	Vessel length category	String	Code list	Vessel length grouped into: "<8" "8-10" "10-12" "12-15" ">=15"
9	Gear code	String	Code list	DCF level 4**
10	Fishing activity category European lvl 6**	String	Code list	fishing activity category – it is recommended to submit DCF level 6*
11	Average fishing speed	Decimal numeral	1 to 50	Average fishing speed within the aggregation: year, month, c-square, vessel length category, gear code and DCF métier .
12	Fishing hour	Decimal numeral	1 to 9999999999	Fishing hour calculated from VMS data (excluding non-fishing activity).
13	Average Vessel Length overall	Decimal numeral	1 to 200	Average vessel length within the aggregation: year, month, c-square, gear code and DCF métier .
14	Average kW	Decimal numeral	1 to 9999999999	Average vessel power (kW) within the aggregation: year, month, c-square, gear code and DCF métier .
15	kW*fishing hour	Decimal numeral	1 to 9999999999	
16	Tot weight	Decimal numeral	1 to 9999999999	Total landings of all species caught. In kg
17	Tot value	Decimal numeral	1 to 9999999999	Total value of all species caught. In Euro

***Only for c-squares with 2 vessels or less. Every anonymized vessel id must be unique per country.**

**DCF level = Fishing activity – Metier:

http://datacollection.jrc.ec.europa.eu/wordef/fishing-activity-metier.

WGSFD 2017 recommended to include technical gear innovations in the metier level 6 notation

http://ices.dk/marine-data/Documents/RDB/RDB%20Metiers%20by%20fishing%20grounds.csv

Appendix 2: Exchange format for reporting logbook data

Order	Name	Type	Basic checks	Comments
1	Record type	String		Fixed value LE
2	Vessel Flag Country	String	Code list	ISO 3166-1 alpha-3 codes. The flag country of the vessel.
3	Year	Integer	Code list	1900 to 3000
4	Month	Integer	Code list	1 to 12
5	Number of distinct vessels	Integer	Code list	1 to 99 999
6	Anonymized vessel id*	String		Country code + 3 digits and semicolon separated. Example: ESP001; ESP003
7	ICES statistical rectangle	String	Code list	Uppercase, e.g. 45F2
8	Gear code	String	Code list	DCF level 4*
9	All fishing activity category European lvl 6**	String	Code list	All fishing activity category – DCF level 6**
10	Vessel length category	String	Code list	Vessel length grouped into: "<8" "8-10" "10-12" "12-15" ">=15"
11	VMS enabled category	String	Code list	Yes/No
12	FishingDays	Decimal numeral	1 to 9999999999	Number of fishing days by ICES rectangle. If a vessel fished in several ICES squares one day, the day will be divided by the number of ICES rectangles.
13	kW*fishing days	Decimal numeral	1 to 9999999999	
14	Tot weight	Decimal numeral	1 to 9999999999	Total landings of all species caught. In kg
15	Tot value	Decimal numeral	1 to 9999999999	Total value of all species caught. In Euro

*** Only for c-squares with 2 vessels or less .Every anonymous vessel id must be unique per country.**

**DCF level = Fishing activity – Metier:

http://datacollection.jrc.ec.europa.eu/wordef/fishing-activity-metier

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