

HELCOM Metadata catalogue

Fishing intensity and effort 2016-2021 (VMS data)

This dataset contains fishing intensity and effort data 2016-2021 based on VMS data. The data has been provided to ICES by Members States and processed to C-square resolution data products by ICES WGSFD on request by HELCOM. The data was used in HELCOM HOLAS3 SPIA analysis, CumI and Bycatch indicators.

Anonymity considerations

In order to protect the anonymity of fishing vessels the values of certain attributes are not provided directly (in the case there are less than 3 fishing vessels present in that cell) and are instead given

a value of 'NA'. In order to allow time series and maps to be created for these sensitive attributes three

other values are provided for all cells, these are:

* x_cat: a character description of a range in which the attribute value falls into

* x_cat_low: the numeric lower bound of this category

* x_cat_high: the numeric upper bound of this category

where 'x' is the name of the attribute. The categories are calculated per year and are consistent across years and quarters. This

can be thought of as providing the colour grouping of a cell if plotted on a map, where the map scale is

consistent across years and quarters but with a separate scale for each gear and attribute.

The scales or categories are calculated simply by splitting the range of the attribute values into 10 equally spaced bins, for example if the range of the data is from 5 to 25, the bins would be (5-7, 7-9, 9-11, ..., 23-25).

The attributes considered sensitive are:

* Total Weight

* Total value

* Kw Fishing Hours

* Fishing hour

a. All gear types: effort, especially need information on static gears to be included, i.e. FYK, GTR, GNS, LLS, FPO per month or quarter (minimum) of 2016-2022

Temporal resolution:

* year (2016-2021)

* quarter

spatial resolution:

* c-square

Gear groups, e.g. (following level 3 of EU-MAP 2021/1167 table 5):

* Dredges (DRB),

* Bottom trawls (OTB, OTT, PTB, TBN, TBS),

- * Pelagic trawls (OTM, PTM),
- * Longlines (LL, LLS, LLD, LX),
- * Traps (FPO, FYK, FPN)
- * Nets (GNS, GTR, GND, GTN)
- * Demersal seines (SDN, SSC)

Dataset

- * Effort in kW Fishinghours

Anonymity

kW Fishinghours are subject to anonymity considerations.

b.i. Intensity of mobile bottom contacting gears

Temporal resolution:

- * year (2016-2021)
- * quarter

spatial resolution:

- * c-square

Gear groups, only mobile bottom contacting gears:

- * Total
- * Dredge (DRB)
- * Demersal seine (SDN, SSC)
- * Otter trawl (OTB, OTT, PTB, TBN, TBS)

Benthic Metiers

- * OT_CRU
- * OT_DMF
- * OT_MIX
- * OT_MIX_CRU
- * OT_MIX_DMF_BEN
- * OT_MIX_DMF_PEL
- * OT_MIX_CRU_DMF
- * OT_SPF
- * TBB_CRU
- * TBB_DMF
- * DRB_MOL
- * SDN_DMF

Dataset:

- * Surface area in km2 (swept area)
- * Surface SAR

* Subsurface area in km2 (swept area)

* Subsurface SAR

* Total weight

* Total value

* kW fishing hours

* Fishing hours

Anonymity

Surface and subsurface area impacted, surface and subsurface SAR are not subject to anonymity constraints.

Total weight, Total value, kW fishing hours and Fishing hours are subject to anonymity considerations.

b. Iii Provide the footprint of the grid cells that contain 90% of the highest fishing intensity of total fishing effort in the region. The resulting area or footprint can be defined as the core fishing grounds (or the smallest area that comprises 90% of the total swept area).

Temporal resolution:

* year (2016-2021)

* quarter

spatial resolution:

* c-square

Gear groups, only mobile bottom contacting gears:

* All mobile bottom contacting gears.

Dataset:

None, only c-squares in the footprint are provided.

Anonymity:

No issues with anonymity

b.iv The areal fraction per grid cell where 100% of the swept area occurs (alternatively fraction per grid cell without trawling)

Temporal resolution:

* year (2016-2021)

* quarter

spatial resolution:

* c-square

Gear groups, only mobile bottom contacting gears:

* All mobile bottom contacting gears.

Layers:

max_fraction_fished

Anonymity:

max_fraction_fished is not subject to anonymity considerations.

details

As data is provided to ICES at the c-square level, it is not possible to provide information at the sub c-square level therefore only the maximum fraction fished can be provided.

There are methods for modeling the fraction fished investigated by the ICES WGSFD. In addition, plans are being developed to request the fraction of substrate trawled by c-square in future data calls.

Notes on shapefile field names

since shape files have a restriction that field names can only be 10 characters long, the following abbreviations have been made:

- * sur = surface
- * subsur = subsurface
- * sur_sar = surface_sar
- * subsur_sar = subsurface_sar

- * kwfhr = kw_fishinghours
- * kwfhr_c = kw_fishinghours_cat
- * kwfhr_cl = kw_fishinghours_cat_low
- * kwfhr_ch = kw_fishinghours_cat_high

- * fhr = fishing_hours
- * fhr_c = fishing_hours_cat
- * fhr_cl = fishing_hours_cat_low
- * fhr_ch = fishing_hours_cat_high

- * totwt = totweight
- * totwt_c = totweight_cat
- * totwt_cl = totweight_cat_low
- * totwt_ch = totweight_cat_high

- * totval = totvalue
- * totval_c = totvalue_cat
- * totval_cl = totvalue_cat_low
- * totval_ch = totvalue_cat_high

- * max_frac = max_fraction_trawled

Simple

Unique resource identifier	https://metadata.helcom.fi/geonetwork/srv/eng/catalog.search#/metadata/0195e2c6-6b83-49ea-a0db-41f14a316c87
pointOfContact <i>HELCOM Secretariat</i>	
GEMET - INSPIRE themes, version 1.0	<ul style="list-style-type: none"> • Statistical units • Habitats and biotopes • Sea regions
GEMET	<ul style="list-style-type: none"> • fishing • fisheries management • commercial fishery
Keywords	<ul style="list-style-type: none"> • MADS
Use constraints	Other restrictions
Other constraints	Use constraints: Data can be used freely given that the source (HELCOM) is cited.
Access constraints	Other restrictions
Other constraints	Access constraints: No limitations on public access.
Spatial representation type	Vector
Metadata language	English
Topic category	<ul style="list-style-type: none"> • Environment

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Begin date	2016-01-01 Unknown
End date	2021-12-31 Now
Unique resource identifier	EPSG:3035
Distribution format	<ul style="list-style-type: none"> • ESRI Shapefile (1.0)
OnLine resource	View Fishing effort all gear types 2016-2021 (WWW:LINK-1.0-http--link)
OnLine resource	Download Fishing effort all gear types 2016-2021 (WWW:LINK-1.0-http--link)
OnLine resource	Download Fishing intensity total 2016-2021 (WWW:LINK-1.0-http--link)
OnLine resource	View Fishing intensity total 2016-2021 (WWW:LINK-1.0-http--link)
OnLine resource	Download Fishing footprint 2016-2021 - 90% of highest fishing intensity (WWW:LINK-1.0-http--link)
OnLine resource	View Fishing footprint 2016-2021 - 90% of highest fishing intensity (WWW:LINK-1.0-http--link)
OnLine resource	Download Maximum fraction trawled 2016-2021 (WWW:LINK-1.0-http--link)
OnLine resource	View Maximum fraction trawled 2016-2021 (WWW:LINK-1.0-http--link)
Hierarchy level	Dataset

Conformance result

Date (Publication)	2010-12-08
Statement	<p>The VMS data has been provided to ICES by Members States and processed to C-square resolution data products by ICES WGSFD on request by HELCOM.</p> <p>As data is provided to ICES at the c-square level, it is not possible to provide information at the sub c-square level therefore only the maximum fraction fished can be provided.</p>
File identifier	0195e2c6-6b83-49ea-a0db-41f14a316c87 XML
Metadata language	English
Character set	UTF8
Hierarchy level	Dataset

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Overviews

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