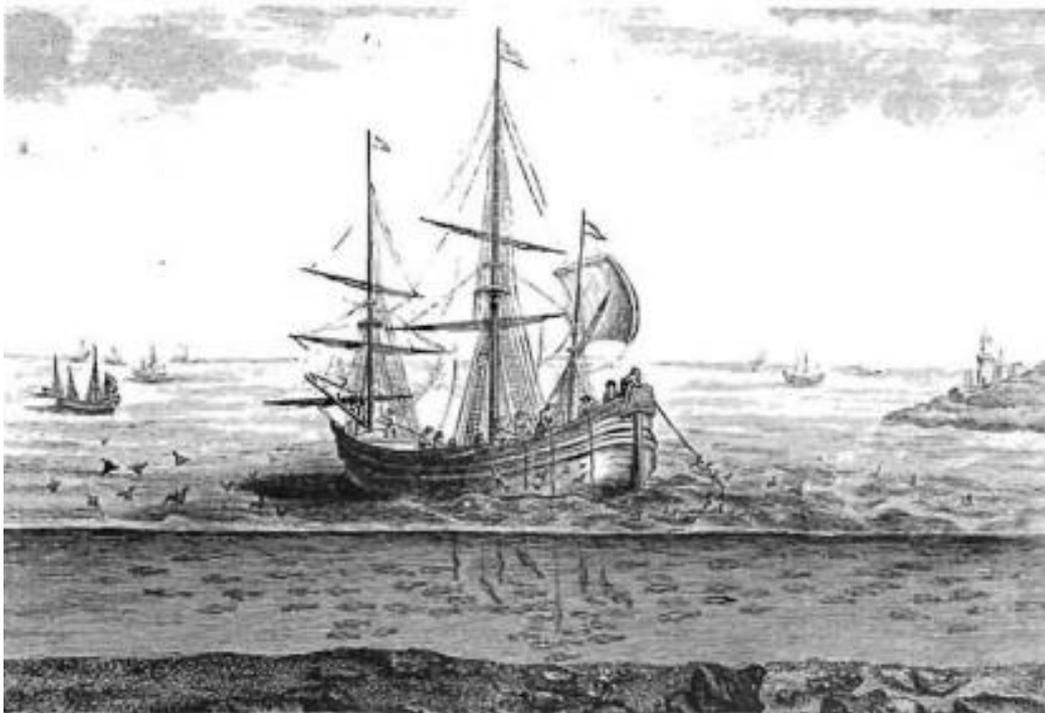




Norfish Dataset
**French North East Atlantic
Cod Fishery
1520–1829**

Supporting Documentation

Bernard Allaire, Poul Holm, John Nicholls



*French vessel line fishing for cod in the 18th century –
original drawing by Duhamel du Monceau, 1789.*

(Perrin 2020)



French North East Atlantic Cod Fishery 1520–1829

Summary

Dataset Title: French North East Atlantic Cod Fishery 1520-1829
Norfish Case Study: French North East Atlantic Cod Fishery 1520-1829
Large Marine Ecosystem: 59: Iceland Shelf and Sea; 22: North Sea
Subject: Catches, French, cod, Iceland, North Sea, 1520-1829

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Extent: 310 records

Keywords: Atlantic cod catches, French, Iceland, North Sea, 1520-1829

Citations:

- a. **The dataset:** please cite as follows Allaire, B., Holm, P. and Nicholls, J. 2021. Norfish: French North East Atlantic Cod Fishery 1520-1829. Dublin: TCD
- b. **Supporting documentation:** please cite as follows Allaire, B., Holm, P. and Nicholls, J. 2021. Norfish Supporting Documentation: French North East Atlantic Cod Fishery 1520-1829. Dublin: TCD



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Sources and Chronology

The French cod fishery “may” be sourced as early as the 12th century when Basques crossed the Atlantic in search of whales. In the 15th century, following the Basques, Bretons and Normans were active off the Grand Banks of Newfoundland. By about 1550, Dunkerque fishers became active in the North Sea, catching cod that migrated from the English Channel. (Hersart de La Villemarqué 1995, p.9)

This dataset focuses on French catches off the coast of Iceland and in the North Sea but may include catches in the Channel and surrounding waters. Little is known about the 15th and 16th centuries in statistical terms. As per the examples above, some anecdotal evidence is available to verify the activity of a fishery.

Data was assembled in tranches based on availability. Several specific periods arise.

1520 to 1696

The period 1520 to 1696, with the exception of the years 1614 to 1617, provides no statistical data that can be reported. The brief series that is available depicts catches landed at Dunkerque for 1614, 1615 and 1617. These years are provided as an average of 112 metric tonnes (t) per annum with average figures for the numbers of vessels (7) and number of fishers (56) per annum. A typical value of 2 tonnes per fisher is depicted for 1614 to highlight the level of effort that was expended. These vessels and fishers were reportedly active off the coast of Iceland (Statistique des Pêches 1887).

From this basis, the first available data in 1614 was used to estimate values prior to 1614 at 112 t per annum. Similarly, values between 1618 and 1696 are assumed at 112 t per annum based on the given values for 1617.

1696 to 1829

For this period, despite several gaps in the series, the data is reasonably contiguous and provides a clear indication of the scale of the fishery. All available data relates to landings at Dunkerque as reported in the Statistique des Pêches (1887, 1888, 1890) with the exception of landings for 1767 and 1787 which are reported in Innes (1978) but also for Dunkerque. The table of values that was adopted is provided by Palmadóttir (1989) and is reflected again in Jónsson (1994, p.13 Table 5). These data are also supplied, but in non-specific graphic form as a chart, by Hersart de La Villemarqué (1994).



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Data for many of the available years includes numbers of vessels, numbers of fishers and metric tonnes landed. Crew lists are only available from 1814; typical vessels in the 18th century carried 7-8 men.

The missing years from the series are as follows: 1697-99, 1702, 1704-14, 1718-29, 1742-50, 1758-62, 1793-98, 1808-13. For these missing years, the Capacity Trend Method was again applied to provide a reasonable trend against the Icelandic fishery values (Nicholls et al 2020).

Conversion Factors

Catch weight values are provided in metric tonnes as reported above. However, Jónsson (1994) provides conversions for determining the original weight measure of barrels into metric tonnes:

- Flemish barrels were used until 1784: 1 barrel = 135 kg
- This was revised from 1785-1852: 1 barrel = 125 kilogram

Other Processes

The marine species information that informs the dataset is obtained from the World Register of Marine Species (WoRMS 2020) which validates common species names, scientific names and sources.

The Metadata system underpinning the dataset is based on Darwin Core (OBIS 2017; 2020) which provides static formulations of all data fields as outlined in the Data Fields section of this document.



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Data Fields

| Darwin Core Field Name | Description |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| occurrenceID | A globally unique “per record” identifier based upon the concatenated institutionCode, collectionCode, catlogNumber and ID fields (TCD_Norfish_FreNeaAllHolNicCod_1) |
| type | Description of data series type. (Dataset) |
| modified | Most recent date the data was modified; ISO 8601 metric date/time standards apply. (2021-02-22) |
| license | Data licensing conditions that apply. (http://creativecommons.org/licenses/by/4.0/legalcode) |
| bibliographicCitation | Author citation for the dataset. (Allaire, B., Holm, P. and Nicholls, J. 2021. Norfish: French North East Atlantic Cod Fishery 1520-1829. Dublin: TCD) |
| references | Denotes the link where more detailed information about the dataset is held. (http://www.vliz.be/imis?module=project&proid=5064) |
| institutionCode | Identifies the institution which owns the data - Trinity College Dublin. (TCD) |
| collectionCode | Code of the project or research group. (Norfish) |
| datasetName | Name of the dataset. (French North East Atlantic Cod Fishery 1520-1829) |
| basisOfRecord | Specifies the nature of the observed or researched specimens or data. (HumanObservation) |
| dataGeneralizations | Source data that informs the provenance of the data. (Sources: Hersart de La Villemarqué, J. 1994. French cod fisheries from the sixteenth to the middle of the |



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| | |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | twentieth century. ICES mar. Sci. Symp. 198. pp.56-58; Statistique des Pêches Maritimes et de L'Ostréiculture pour L'année 1890. Ministère de la marine. Paris.) |
| catalogNumber | Identifier of the data within the institution and project – “Fre” refers to French, “NEA” refers to North East Atlantic, “Hol” refers to Holm, “Nic” refers to Nicholls, “All” refers to Allaire, “Cod” refers to cod. (FreNEAHolNicAllCod) |
| occurrenceRemarks | Comments about the occurrence record. (NA) |
| recordedBy | Researchers who recorded the data. (Poul Holm Bernard Allaire John Nicholls) |
| organismQuantity | Quantity of fish represented in the record shown in Kg live weight. (122953) |
| organismQuantityType | organismQuantity unit of measurement. (biomass in kilograms (kg)) |
| occurrenceStatus | Stipulates the physical presence or absence of animals relating to the record. (present) |
| eventDate | Actual date and time at which an occurrence was recorded. ISO 8601 metric date/time standards apply. (1520) |
| year | Year taken from the eventDate field. (1520) |
| locationID | Marine Region unique identifier. (http://marineregions.org/mrgid/36316) |
| locality | Local name for the overall location or region. (Iceland coast and Sea, North Sea, Channel) |
| locationAccordingTo | MRGID location identifier based on the marineregions.org/mrgid system. (MRGID) |
| locationRemarks | Description of location identifier. (NOAA described Large Marine Ecosystem) |



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| | |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| decimalLatitude | Latitude shown in decimal notation based on the WGS 84 (EPSG:4326) geodetic datum standard. (66.57046) |
| decimalLongitude | Latitude shown in decimal notation based on the WGS 84 (EPSG:4326) geodetic datum standard. (-15.5671) |
| coordinateUncertaintyInMeters | The smallest circle (radius) in metres from the ground zero point depicted by the decimalLatitude and decimalLongitude fields. In this instance, “530259” depicts a radius of c. 530 Km. |
| georeferenceRemarks | Remarks indicating the geographic area identified – Large Marine Ecosystems are used. (59: Iceland Shelf and Sea) |
| scientificNameID | The WoRMS LSID associated with the scientificName, based on the Marine Species database. (urn:lsid:marinespecies.org:taxname:126436) |
| scientificName | Scientific name of the animal based upon the vernacularName. (Gadus morhua) |
| kingdom | Together with taxonRank assists in determining broader animal characteristics for darwinCore search engines. (Animalia) |
| taxonRank | Together with kingdom assists in determining broader animal characteristics for darwinCore search engines. (species) |
| scientificNameAuthorship | Based on the scientificNameID field and discoverable through the WoRMS database. (Linnaeus, 1758) |
| vernacularName | Literal common name applied to the animal involved. In this case, all values are morue – the French common name for cod |
| identificationRemarks | Details that assist in identifying the animal. |



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(Common name for cod is morue; also known as morus, morue franche, cabillaud de l'Atlantique and cabillaud)

conversion Conversion factor applied to derive catchMT.
(Flemish barrels were used until 1784: 1 barrel = 135 kg; this was revised from 1785-1852: 1 barrel = 125 kilogram)

port Port of origin of the vessels.
(Dunkerque)

portLatitude Latitude of the port of origin shown in decimal notation based on the WGS 84 (EPSG:4326) geodetic datum standard.
(51.041059)

portLongitude Longitude of the port of origin shown in decimal notation based on the WGS 84 (EPSG:4326) geodetic datum standard.
(-2.357503)

numberOfVessels The given annual number of vessels engaged in the fishing operation.
(7)

numberOfFishers The given number of fishers engaged in the fishing effort on the vessels identified in numberOfVessels.
(56)

averageTonnagePerVessel Given average number of tonnes loaded per fishing vessel.
(33)

tonnesPerFisher Given average tonnes of fish caught per fisher per annum.
(8)

catchMT Derived metric tonnes value based on the calculated fields as shown in the conversion field, or as shown in the codes field.



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trafficLight Traffic Light coding system denotes level of certainty, and/or level of accuracy that can be described for each record; see Appendix 1 for details.

codes Explanation codes that highlight the process for each record; see Appendix 2 for details.

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Appendix 1

Traffic Light System

| Traffic Light | Explanation |
|---------------|-------------------------------------------------------------------------------------|
| green | Given values with minimal conversion |
| amber | Calculated values based on given vessel numbers |
| red | Calculated values based on simple extrapolation between first and last given points |

Appendix 2

Codes

| Codes | Explanation |
|-------|----------------------------------------------------------------------------------|
| a | Assumed minimum value |
| b | Capacity trended value from first and last given values based on Icelandic trend |
| c | Given catch value in metric tonnes |
| d | Given number of vessels |
| e | Given number of Fishers |
| f | Given average Tonnage Per Vessel |
| g | Given tonnes Per Fisher |