NorFish
An Environmental History of the North Atlantic
- 1400-1700 -

Norfish Dataset 20

English North East Atlantic Cod Fishery 1520–1790

Supporting Documentation

Poul Holm, John Nicholls

Timeless image of Iceland cod drying in the cold air

(Kimming n.d.)

English North East Atlantic Cod Fishery 1520–1790

Summary

Dataset Title:	English North East Atlantic Cod Fishery 1520-1790
Norfish Case Study:	English North East Atlantic Cod Fishery 1520-1790
Large Marine Ecosystem:	59: Iceland Shelf and Sea; 22: North Sea
Subject:	Catches, Iceland, North Sea, cod, 1520-1790
Author:	Poul Holm, John Nicholls Norfish Project Centre for Environmental Humanities Trinity College Dublin
Data Provider:	Poul Holm Norfish Project Centre for Environmental History Trinity College Dublin
Data Editors:	John Nicholls Norfish Project Centre for Environmental History Trinity College Dublin
Extent:	277 records
Keywords:	Atlantic cod catches, Shetland, North Sea, 1520-1796

Citations:

a. **The dataset:** please cite as follows Holm, P. and Nicholls, J. 2021. Norfish: English North East Atlantic Cod Fishery 1520-1790. Dublin: TCD

b. **Supporting documentation:** please cite as follows Holm, P. and Nicholls, J. 2021. Norfish Supporting Documentation: English North East Atlantic Cod Fishery 1520-1790. Dublin: TCD

Contents

Summary 2
Contents 3
Sources and Chronology 4
Conversion Factors 6
Other Processes 6
Data Fields 7
Bibliography 11
Appendix 1 12
Appendix 2 12

Sources and Chronology

In the 15th and early 16th century the English cod fishery in the North East Atlantic was an important industry for England.

> *"While few today are even aware that the English fished off Iceland at this time, it was regarded by contemporaries as one of England's most important fisheries.*[1] *Indeed, in the 1630s the cod and ling fisheries off Iceland had been described as the 'greatest fishing of the kingdom' which, 'exceedeth the Newfoundland & herring fishing'.*[2] *And while this might have been a slight exaggeration, it was not much of one; for the Iceland fishing fleet, which came mostly from Norfolk and Suffolk, could contain as many as 160 ships of between 50 and 150 tons burden."*[3]
>
> (Jones 2006, p.1)

The limited sources available for the English North East Atlantic fishery have largely been collected by Jones (2000) based on various sources including Foreign and Domestic letters and papers, Statutes of the Realm, State Papers, and ship logbooks and other archival materials. Active fishing efforts are recorded from various English ports along the east coast of England. The primary fishing grounds were around Iceland, but some fishing took place in the North Sea as well. It is likely that incidental fishing took place in the North Sea in transit from or to the Icelandic waters. The available data includes, where available, numbers of vessels deployed, numbers of fishers who were active, and tonnage of vessels.

Before 1528

We have no statistical data of fishing effort before 1528 that can be reported. However, anecdotal and qualitative information informs us that the English had an active fleet operating in Icelandic waters since at least 1412 (Thorsteinsson 1970). In 1490 a treaty was joined with Iceland to enable English vessels to fish (Jones 2000). This is further enhanced when a Scottish threat to the English Iceland fleet is mentioned in a letter between Lord Surrey and Wolsey in 1523:

[1] Jones cites his earlier work: Jones 2000.

[2] Jones cite The National Archives: TNA S.P. 16/229 no. 80.

[3] Jones cites State Papers: Cal. S.P. Domestic, Charles I, 1627-28, p. 512; TNA S.P. 16/229 no. 80.

> *"… the Scotts entende to set forth vi or vii ships to the Ilonds to mete with the Islonde flete in retornyng homwards, wich if they do a mervelous domage shall ensue, and the costs of Norfolk and Suffolk undone and all Inglond shalbe destitute of fish next yere*."
>
> (Ibid.)

This was not a vain threat; the Scots were not thinking of fishing themselves but of capturing the English fishing fleet on their return from Iceland, which would have been feasible with a few naval ships.

1528 to 1790

From 1528 sporadic values are available based on information extracted from various archival and related sources. The specific years in which data are supplied are: 1528, 1533, 1551, 1565, 1593, 1614, 1628, 1639, 1654, 1656 to 1659, 1668, 1675, 1680 and 1702. Data for these years, provided by Jones (2000), is in the form of numbers of active vessels with a vessel tonnage ranging between 10 and 90 tons as given in the 1528 data, along with an average crew of 30 per vessel mentioned. These are typical values except for 1702 where only the total number of crew is given (Ibid.). The values for 1654 are provided in Jones's *The Journal of the Marigold, 1654* (2006).

A mean average tonnage of 57 metric tonnes was derived to determine the burthen weight of a typical vessel. Calculations were made to determine the total vessel tonnage based on the number of vessels multiplied by the mean average tonnage.

The total number of fishers was determined by multiplying the number of vessels by the given average of 30 crew per vessel.

The total number of individual cod that were caught was derived by multiplying the total tonnage by 300. This value is provided by Jones (2000) in his estimation that 1200 cod amounted to 4 metric tonnes.

The final catch in metric tonnes was calculated from the number of cod multiplied by 0.008; the average weight of cod was taken as between 5 and 12 Kg, with a mean of 8 Kg being adopted.

1703 to 1790

From 1703 there are no available records and values had to be extrapolated. The capacity Trend Method was used to obtain reasonable trends of annual values based on the trend of the Icelandic Fishery. By the beginning of the 18th century, the annual North East Atlantic fishing effort was considerably reduced and did not recover to the peaks experienced in the late 1620s. Arguably, this was due to cod fishing vessels deploying to Newfoundland to take advantage of the bounty of the North West Atlantic cod fishing industry that became dominated by England in the late 17th century and beyond. Throughout the 18th century there is no evidence of any meaningful recovery while the Newfoundland cod fishery expanded massively.

Conversion Factors

- Average weight per vessel (mean tonnage) = 57 metric tonnes
- Average crew per vessel = 30 fishers
- Average cod (typically 5 to 12 Kg) = 8 Kg
- 1200 cod = 4 metric tonnes (Jones 2000)

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.

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_EngNeaHolNicCod_1)
type	Description of data series type. (Dataset)
modified	Most recent date the data was modified; ISO 8601 metric date/time standards apply. (2021-03-01)
license	Data licensing conditions that apply. (http://creativecommons.org/licenses/by/4.0/legalcode)
bibliographicCitation	Author citation for the dataset. (Holm, P. and Nicholls, J. 2021. Norfish: English North East Atlantic Cod Fishery 1520-1790. 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. (English North East Atlantic Cod Fishery 1520-1790)
basisOfRecord	Specifies the nature of the observed or researched specimens or data. (HumanObservation)
dataGeneralizations	Source data that informs the provenance of the data. (Sources: Jones, E. T. 2000. England’s Icelandic Fishery in the Early Modern Period. In: England’s Sea Fisheries. The Commercial Sea Fisheries of England

	and Wales since 1300. D. J. Starkey, C. Reid and N. Ashcroft (Eds). London: Chatham. pp.105-110.).
catalogNumber	Identifier of the data within the institution and project – "Eng" refers to English, "Nea" refers to North East Atlantic, "Hol" refers to Holm, "Nic" refers to Nicholls, "Cod" refers to cod. (EngNeaHolNicCod)
occurrenceRemarks	Comments about the occurrence record. (Fishing took place around the coast of Iceland, in the Icelandic Sea and into the North Sea)
recordedBy	Researchers who recorded the data. (Poul Holm | John Nicholls)
organismQuantity	Quantity of fish represented in the record shown in Kg live weight. (20383200)
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/8535)
locality	Local name for the overall location or region. (Iceland coast and Icelandic Sea and North Sea)
locationAccordingTo	MRGID location identifier based on the marineregions.org/mrgid system. (MRGID)
locationRemarks	Description of location identifier. (NOAA described Large Marine Ecosystem)

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 decimalLattitude 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; 22: North Sea)
scientificNameID	The WoRMS LSID associated with the scientficName, 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 scietificNameID field and discoverable through the WoRMS database. (Linnaeus, 1758)
vernacularName	Literal common name applied to the animal involved. In this case, all values are Gronge – the Shetland common name for cod
identificationRemarks	Details that assist in identifying the animal.

	(Common name used was cod - often simply referred to as stockfish, dry, fresh or green fish)
conversion	Conversion factor applied to derive catchMT. (Average weight per vessel (mean tonnage) = 57 metric tonnes; Average crew per vessel = 30 fishers; Average cod (typically 5 to 12 Kg) = 8 Kg; 1200 cod = 4 metric tonnes (Jones 2000))
numberOfVessels	Number of vessels engaged in the fishing effort. (149)
vesselTonnage	Typical tonnage (burthen) per vessel engaged in the fishing effort. (30-90)
meanVesselTonnage	Mean (average) tonnage per vessel in metric tonnes. (57)
totalVesselTonnage	Total tonnage of vessels engaged in the fishing effort. (8493)
averageNumberOfFishers	Average number of fishers per vessel engaged in the fishing effort. (30)
numberOfFishers	Number of fishers engaged in the fishing effort. (4470)
totalNumberOfCodIndividuals	Number (count) of cod fish caught in the fishing effort. (2547900)
catchMT	Derived metric tonnes value based on the calculated fields as shown in the conversion field, or as shown in the codes field.
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.

Bibliography

- Jones, E. T. 2000. England's Icelandic Fishery in the Early Modern Period. In: England's Sea Fisheries. The Commercial Sea Fisheries of England and Wales since 1300. D. J. Starkey, C. Reid and N. Ashcroft (Eds). London: Chatham. pp.105-110.
  - 2006. The Journal of the Marigold, 1654. [e-version]. [online]. https://research-information.bris.ac.uk/files/3000332/Marigold2006.pdf. [Accessed 20 February 2021].
- Kimming, A. *n.d.* Nature History Heritage: Medieval Histories. [online]. https://www.medieval.eu/medieval-cod-wars-1415-2017/. [Accessed 20 February 2021].
- Nicholls, John., Allaire, Bernard and Holm, Poul. 2021. The Capacity Trend Method: A new approach for enumerating the Newfoundland cod fisheries (1675–1790). Historical Methods: A Journal of Quantitative and Interdisciplinary History. DOI: 10.1080/01615440.2020.1853643
- OBIS Ocean Biogeographic Information System of UNESCO. 2017. Manual: DarwinCore. [Online] Available at: http://www.iobis.org/manual/darwincore/ [Accessed 29 05 2020].
- Thorsteinsson, Björn. 1970. Enska öldin i sögu íslendinga. Reykjavik: Mál og Menning
- WoRMS. World Register of Marine Species – taxa. 2020. http://www.marinespecies.org/aphia.php?p=taxdetails&id=126436. Oostende, Belgium [Accessed: 29 May 2020].

Appendix 1

Traffic Light System

Traffic Light	Explanation
green	Given values with minimal conversion
amber	Calculated values based on some given data
red	Calculated values based on Capacity Trended values derived from Icelandic cod fishery values

Appendix 2

Codes

Codes	Explanation
a	Assumed value based on given 1528 value
b	Given values based on numbers of vessels and crew figures
c	Values calculated using the Capacity Trend method based on Icelandic cod fishery values