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

Norfish Dataset 18

Dutch Icelandic Cod Fishery 1520–1852

Supporting Documentation

Poul Holm, John Nicholls

Model of a 17th century "Hoeker" – a typical Dutch "workhorse" fishing vessel

(Hoving 2020)

Dutch Icelandic Cod Fishery 1520–1852

Summary

Dataset Title:	Dutch Icelandic Cod Fishery 1520-1852
Norfish Case Study:	Dutch Icelandic Cod Fishery 1520-1852
Large Marine Ecosystem:	59: Iceland Shelf and Sea
Subject:	Catches, Dutch, cod, Iceland, 1520-1852

Author:	Poul Holm, John Nicholls Norfish Project Centre for Environmental Humanities Trinity College Dublin
Data Provider:	Poul Holm, John Nicholls Norfish Project Centre for Environmental History Trinity College Dublin
Data Editors:	John Nicholls Norfish Project Centre for Environmental History Trinity College Dublin

Extent:	333 records
Keywords:	Atlantic cod catches, Dutch, Iceland, 1520-1852, Norfish

Citations:

a. **The dataset:** please cite as follows Holm, P. and Nicholls, J. 2020. Norfish: Dutch Icelandic Cod Fishery 1520-1852. Dublin: TCD

b. **Supporting documentation:** please cite as follows Holm, P. and Nicholls, J. 2020. Norfish Supporting Documentation: Dutch Icelandic Cod Fishery 1520-1852. Dublin: TCD

Contents

Sources and Chronology

The first quantitative evidence of Dutch cod fishing off the Icelandic coast is reported in 1655; Captain Jelle Alberts, from Vlieland in Friesland (Frisia) a province of the Netherlands, returned from Icelandic waters after 11 weeks of fishing with a cargo of salted cod. The condition of sale of these sated cod was that each specimen had to measure at least 22 inches to the tail (56cm) or else it would only count as half a cod (two would be counted as one). (Thomas 1935)

In the case of other fisheries such as the English and French Icelandic fisheries, the Dutch figures provide a differentiation between purely Icelandic and further North Sea fishing – English and French figures combine these totals. While both the French and the more profusive English were active from 1520 (and even before) in Icelandic waters, the Dutch came late to the show as indicated in the chronological series below.

1520 to 1660

For this extended period, we can determine with relative certainty that the Dutch cod fishery was not active in any meaningful way (if at all) in Icelandic waters. The Icelandic Annals first recall a Dutch cod fishing vessel in the Breiðafjörður bay, a shallow bay in the west of Iceland in 1661 (Jönsson 1994, p.11) [1]. The isolated voyage of 1655 undertaken by Captain Alberts (as discussed above) serves to highlight the exception to the rule that this period was inactive but showed some signs of development by 1661.

1661 to 1682

From the first reports in the Icelandic annals until 1682, there are no further records available, but the active scale of the fishery reported in 1683 onwards highlights the development of an active fishery. The period has been afforded a series based on an interpolation between the first available figures in 1683 and the nominal figure of 1 metric tonne which may represent a minimum value for the single vessel reported in 1661.

1683 to 1690

As mentioned before, prior to 1682 there are no Dutch statistics that provide any distinction between vessels fishing in the North Sea and those fishing off Iceland; similarly, there is no

[1] Jönsson cites the Icelandic Annals (Islenskir annälar 1400-1800. Hi6)

distinction prior to this date between herring and cod vessels. However, from 1683 to 1690 a small series of vessel numbers is available (Jönsson 1994, p.11)

Year	Number of Vessels fishing off Iceland
1683	7
1684	26
1685	20
1686	14
1687	9
1688	5
1689	7
1690	9

Table 1: Number of Dutch vessels fishing specifically off Iceland 1683-1690 as indicated in the Icelandic Annals (Ibid. [2])

To obtain a typical annual catch values, an assumed conservative value of 25 lasts per vessel on average was applied, equating to about 50 metric tonnes per vessel.

1691 to 1750

A complete lack of quantitative evidence for this period required a simple interpolated series to be applied between the first and last given values from 1690 and 1751.

1751 to 1852

Jönsson (1994, p11, Table 4) provides a comprehensive listing of annual vessel numbers between 1751 and 1852. The table includes average numbers of lasts per vessel with some notable exceptions. The years 1757 to 1759, 1762 to 1765, 1778, 1781 to 1786, and 1787 to1852 are limited by either a lack of available data relating to the average numbers of lasts per vessel or have these averages recorded qualitatively. The period 1787 to 1801 has no

[2] Jönsson (1994, p.15) also cites the aid of Gunnar Stefánsson and Höskuldur Björnsson “for their help computing the data and in calculating and graphically presenting the yearly catch indices from the Icelandic Annals”.

available figures and is filled with simple extrapolated values based on given first and last points. The original source material that was used provides some insights into the earlier period up to 1786 (Thomas 1935, Appendix J). While the years 1781 and 1782 are completely empty and known as zero values due to prevailing warfare, the translated qualitative reports indicate that averages may have reasonably followed the following schema:

Years affected	Translated terms [3]	Translated terms [4]	Original terms	Assumed average load per vessel in lasts
1757, 1783-84	few	poor	slecht	5
1759, 1785	moderate	moderate	matig	10
1762-65,	reasonable	reasonable	redelijk	15
1758, 1778	many	good	goed	20

Table 2: Assumed values assigned to qualitative terms for average load per vessel for specific years.

Thomas (1935) describes the fishing process. The cod fishing season tended to commence in late March and finished in September each year. To prevent the deterioration of the fish, they were processed at least to some extent on board by salting, however, to avoid being spoiled, small vessels known as Jagers (swift, small cargo vessels called “hunters”) would collect fish from the fishing boats and return them to the market ports. The fishing vessels could continue to fish uninterrupted.

Jönsson (1994, p.12) provides insights into this period, highlighting that the increase in Dutch vessels to Iceland culminated in 1768, but was followed by a gradual decrease; by the 1850s, the number of vessels had fallen to a just 3 to 5 and the fishery was effectively over. The highs of the mid-18th century were not repeated until well after the period of this dataset.

An interesting observation is made Dutch regarding the very low catch (despite a large fleet of vessels venturing out) in 1756. The Icelandic Annals cite masses of ice filling the fjords and bays in that year, particularly on the north coast, leading to a particularly poor catch season. (Ibid.)

Thomas (1935) reports that a vessel that managed a catch of 15 lasts per voyage could recover all of its costs for the season. It is clear that in many seasons the Dutch fleet

[3] As they appear in Jönsson (1994, p11, Table 4)

[4] Translated by the author

to Iceland did not manage to break even, but there were several very good years where good profits will have been realised.

Conversion Factors

1 last = 1.9764 metric tonnes

1 vessel = 50 metric tonnes load (unless otherwise stated)

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_DutIceHolNicCod_1)
type	Description of data series type. (Dataset)
modified	Most recent date the data was modified; ISO 8601 metric date/time standards apply. (2021-02-20)
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: Dutch Icelandic Cod Fishery 1520-1852. 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. (Dutch Icelandic Cod Fishery 1520-1852)
basisOfRecord	Specifies the nature of the observed or researched specimens or data. (HumanObservation)
dataGeneralizations	Source data that informs the provenance of the data. (Source: Zero fishing reported based on Islenskir annälar (Icelandic Annals) 1400-1800. Hi6 l'slenska bôkmenntafélag. Reykjavik.)

catalogNumber	Identifier of the data within the institution and project – “Dut” refers to Dutch, “ice” refers to Iceland, “Hol” refers to Holm, “Nic” refers to Nicholls, “Cod” refers to cod. (DutIceHolNicCod)
occurrenceRemarks	Comments about the occurrence record. (averageLastsPerVessel given by Thomas (1935 Appendix 4) is 2 to 4)
recordedBy	Researchers who recorded the data. (Poul Holm | John Nicholls)
organismQuantity	Quantity of fish represented in the record shown in Kg live weight. (20225)
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)
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)
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 Atlantische kabeljauw – the Dutch common name for Atlantic cod
conversion	Conversion factor applied to derive catchMT. (1 last = 1.9764 metric tonnes; 1 vessel = 50 metric tonnes load (unless otherwise stated))
numberOfVessels	The given annual number of vessels engaged in the fishing operation.

averageLastsPerVessel	The typical average number of lasts that each vessel carried; includes weight of any fish returned to port early via “jagers”.
lasts	Weight of cod caught in lasts.
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.

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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	lasts and catchMT calculated based on noOfVessels and averageLastsPerVessel
b	Average value of lasts based on averageLastsPerVessel given by Thomas (1935 Appendix 4)
c	values extrapolated based on averageLastsPerVessel trend
d	noOfVessles calculated based on averageLastsPerVessel
e	Zero values assumed based on given report for 1661 (Islenskir annälar (Icelandic Annals))
f	Given single vessel with minimum cargo assumed
g	values extrapolated based on first and last given available values
h	catchMT calculated based on given number of vessels and assumed weight of 50 metric tonnes per vessel