



Norfish Dataset 07

German Herring Fishery

1520–1790

Supporting Documentation

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*In the port of a Hanseatic town – a typical German fishing port in the 16th and 17th centuries
(Kulturgeschichtliche Bilder Nr. 1 c.1960)*



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Summary

Dataset Title: German Herring Fishery 1520-1790

Norfish Case Study: German Herring Fishery 1520-1790

Large Marine Ecosystem: 22: North Sea;

Subject: Herring catches, North Sea, Baltic Sea, German Herring Fishery 1520-1790

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Extent: 271 records

Keywords: Herring catches; Norfish; Germany; North Sea, Baltic Sea, Emden

Citations:

1. **The dataset:** please cite as follows Holm, P., Nicholls, J. and Dirks, F. 2020. Norfish: German Herring Fishery 1520-1790. Dublin: TCD
2. **Supporting documentation:** please cite as follows Holm, P., Nicholls, J. and Dirks, F. 2020. Norfish Supporting Documentation: German Herring Fishery 1520-1790. Dublin: TCD



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Sources and Chronology

Arguably the greatest impact on the German herring fishery in the period 1520-1790 was the fact that Germany was a conglomeration of small Principalities and Protectorates under the loose leadership of a Holy Roman Emperor which radically changed during the Reformation. Instigated by Martin Luther in 1521 the act of protestation against the Roman Catholic Church's engagement in political and state affairs led to the Peasant's War of 1524-25. The upshot of this process was a printing revolution which saw more than 10,000 pamphlet titles published by 1530, spreading the religious and political message of reform and change to the population (Edwards 1994).

The fisheries, for the large part a loosely connected trade partnership within the Hanseatic League, was buffeted by political events and there is little evidence that any coherent industry was generated. Small and often private concerns were established in places like Hamburg and Bremen which attempted to emulate the success of the behemoth that was the Flemish, and later the Dutch fisheries. These "start-up" companies were clearly impacted from the outset by the political turbulence and warfare that ensued over the period.

The Thirty Years' War from 1618 to 1648, ostensibly a conflict in Germany between Catholic and Protestant factions, fragmented into a complicated series of battles between political and religious rivals from all parts of Europe. Taking place on German soil, the upheaval was tremendous for local industries; the fisheries were no exception. The overall impact was the bankrupting of many of the European powers who engaged in the conflict, and a massive reduction of the population through resultant famine and disease (Augustyn, et al. 2020).

The 18th century saw a period of recovery and the rise of the Prussian Kingdom that unified large areas of Germany under a Protestant leadership. By the end of the century, and the commencement of the Napoleonic Wars, the period of growth and rejuvenation ended. In 1806 the Holy Roman Empire was dissolved, and Germany began the process of coalescing into a nation.

This backdrop paves the scene for the apparently random appearance of viable fisheries in Germany that suddenly and inexplicably disappeared following



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several years of reasonable success. The minimal data that is available highlights the efforts of a concern at Emden, a coastal port city in the German state of East Frisia. Hahn (1941, p.17) provides several sporadic values available from 1770 until 1805, but also a single value for 1597. These figures are cited by Poulsen (2008, pp.61-63) who indicates that the later Emden effort was formulated around the Dutch model of deploying vessels known as “buizen” (large “buses”) which both caught and processed fish onboard. Following the earlier Flemish model of the “kaakharing” process which saw fish lightly salted, headed and cleaned before being stored in barrels, they ensured a better quality, fresher product for the markets (Degryse 1959). Only in 1769 did a new Emden company form giving rise to landings figures again. In total 8 active data points form the basis of this series, but zero landings periods are also recognised.

There is evidence that, contrary to the perceived impression of high-quality Flemish (and later Dutch) herring, Scanian imports to the Germanic coastal cities (Hanseatic League ports) may have been preferred before 1600. As late as 1545 there is an indication that Flemish herring was of low quality and Hamburg preferred Scanian imports. However, the Scanian trade ended by early 1600 (corresponding to the end of the Flemish trade and the rise of the Dutch trade) and imports by the Schonenfahrer (Scanian traders) were of Flemish and Dutch extraction. Some imports trickled through from the Bergenfahrer (traders from Bergen, Norway) but these were regarded as lower quality herring and included imports of dried cod. Between 500 and 6,500 lasts¹ were recorded at the start of the 18th century (Hansische Geschichtsblätter 1906, App.III)

It appears that efforts in Bremen and Hamburg were made as well, but there is little specific reporting. Ventures that started didn't seem to last long due to the dominance/monopoly of the Dutch effort and the turbulent times. An example of an attempted start-up in Hamburg is described by Adolf Jürgens (1914). The plan was to buy 6 vessels to instigate a herring fishery out of Hamburg with fishing to be done off Helgoland. The plan included an initial phase where herring would be purchased

¹ 500 and 6,500 lasts equate to 988 and 12847 metric tonnes respectively based on the Dutch conversion factor of 1:1.9764 (Vliet 1994)



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from Ireland and Scotland prior to setting up for themselves. The plan was approved by the local Duchy of Hamburg, but it came to nothing because of the war (Jürgens 1914, p.50 fn.4).

Both Bremen and Hamburg imported large amounts of herring in parallel with cod. These commodities mainly came from Bergen, Iceland, the Faroe Islands and Shetland. However, archival records for Bremen commence later than for Hamburg; while we can trace numbers for cod from the Bergenfahrer Society's records, the amount of herring over several years is not easily traceable. The numbers for cod seem to decrease very suddenly at the beginning of the 1560s, which becomes clear from the archival records. For example, Bremen State Archives No. 2-R.11.gg.2.a.1 includes a list of commodities transported to Bergen („geschepen na Bergen“)² between 1555-1564 with total values for nearly each year covered:

1556	60 wage runtfisch ³
1557	21 wage rotsche ⁴ , 84 wage runtfisch
1558	29 wage runtfisch
1559	84 wage runtfisch
1561	184 wage runtfisch, 63 wage runtfisch, 7 droge lasse ⁵ , 3 droge lasse, 2 te lass, 70 wage runtfisch
1562	126 wage runtfisch (Lüder Detken?), 84 wage runtfisch (Hermen Meiger?)
1564	42 wage runtfisch, 15 kyp rekeling ⁶ , 9 te lass unde 63 wage runtfisch

In terms of herring imported to Bremen, we can tell the amounts for one year in detail. For 1595 there is a small book of 54 pages which gives names of the skippers and the amount they brought into the town's port (Bremen State Archives 2-Ss.2.b.H.1.a.; c.f. Kappelhoff/Deggim 2011):

² "shipped to Bergen"

³ "round fish" - stockfish (typically dried cod)

⁴ Type of stockfish

⁵ Dry loads

⁶ Strips of halibut



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1595 4,235.63 lasts and 393 barrels

This amounts to 40,662,048 individual herring if one assumes the minimum of 800 herring per typical Bremen barrel.

The Bremen excise tax records for 1617 are apparently the last and oldest fully preserved year of this document type from early-modern Bremen. In this year, merchants imported fish as the main commodity of Bremen; merchants and skippers imported the following:

Approximately 1,000 lasts or 12,000 Bremen barrels Stockfish (mainly cod)

14 lasts of Rotscher

103 tons ling

1 last haddock (all white fish)

Approximately 1,750 lasts herring from the Netherlands

(Hofmeister 2014).

The majority of the imported fish was traded in Bremen by the ship owners or merchant companies either to other merchants, who then sold and transported the fish further to the south, or via middleman agents, the so-called Makler, to foreigners who transported the fish south to, for example, Erfurt or Leipzig, or even further into the Southern German lands along the Rhine and Danube (Straube 2015).

Examples of these activities are corroborated in the trading company books which the Bremen archive preserves, as explained above in the description of the Emden start-up fishery (Hahn 1941; Poulsen 2008)

The massive scale of imports and exports into and from Bremen highlight that it was a major market for fish and that attempts to begin to cash in on this lucrative trade must have been tempting. The case of the Emden fishery underscores this attempted inclusion in the market which would reasonably be assumed to have attracted many more German fisheries. However, the overwhelming success of the Dutch fishing industry was at a level that brokered little successful competition, while the relentless and punishing wars of the period curtailed any sustained effort. Ultimately, it seems, the German herring fisheries were destined to be a small and



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sporadic affair with the Hanseatic League focusing on existing trade ties and relying on imports and exports to drive the markets.

Other Processes

The Capacity Trend Method was used to calculate values for years where no data was available. This process entails a trending process where a trend of annual data is applied between available points in order to determine a series that reflects general trends rather than a simple straight line (Nicholls, Allaire, Holm 2020).

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_GerHolNicHerring_1)
type	Description of data series type. (Dataset)
modified	Most recent date the data was modified; ISO 8601 metric date/time standards apply. (2020-12-12)
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. 2020. Norfish: German Herring 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. (German Herring 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: Hahn, L. 1941. Ostfrieslands Heringsfischereien unter besonderer Berücksichtigung der Geschichte der Emders Heringsfischerei in fünf



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	Jahrhunderten 1552-1940. G Stalling: Oldenburg; Poulsen, Bo. 2008. Dutch Herring - An Environmental History, c. 1600-1860. Amsterdam University Press. DOI: 10.2307. pp.61-63.)
catalogNumber	Identifier of the data within the institution and project – “Ger” refers to German, “Hol” refers to Holm, “Nic” refers to Nicholls, “Her” refers to Herring. (GerHolNicHer)
occurrenceRemarks	Comments about the occurrence record (NA)
recordedBy	Researchers who recorded the data. (Poul Holm John Nicholls)
organismQuantity	Quantity of fish represented in the record shown in Kg live weight. (400264)
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/23602)
locality	Local name for the overall location or region. (Emden, East Frisia, Germany)
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. (53.36667)
decimalLongitude	Longitude shown in decimal notation based on the WGS 84 (EPSG:4326) geodetic datum standard. (7.21667)
coordinateUncertaintyInMeters	The smallest circle (radius) in metres from the ground zero point depicted by the decimalLatitude and decimalLongitude fields. In this instance, "500000" depicts a radius of c. 500Km.
georeferenceRemarks	Remarks indicating the geographic area identified – Large Marine Ecosystems are used. (22: North Sea; 23: Baltic Sea)
scientificNameID	The WoRMS LSID associated with the scientificName, based on the Marine Species database. (urn:lsid:marinespecies.org: taxname:126417)
scientificName	Scientific name of the animal based upon the vernacularName. (Clupea harengus)
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 herring – the German common name for herring
conversion	Conversion factor applied to derive catchMT (1 last = 1.9764 metric tonnes)



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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 values
red	Calculated values capacity trended from Dutch herring fishery annual export figures

Appendix 2

Codes

Codes	Explanation
a	Calculated values based on Capacity Trended figures from the Dutch herring fishery
b	Given values shown as zero – period of known inactivity
c	Given values for periods of known activity