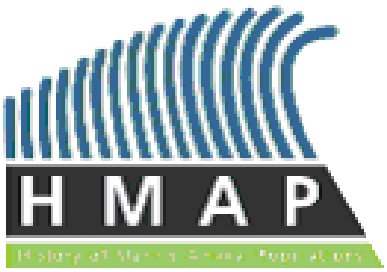
HMAP Dataset 7
Danish Baltic Catch Data, 1611-1920

Supporting Documentation



Summary

Dataset Title:	Danish Baltic Catch Data, 1611-1920
HMAP Case Study:	Baltic
Large Marine Ecosystem:	23: Baltic Sea
Subject:	Baltic fish catches, 1611-1920, derived from Danish archives
Data Provider:	Maibritt Bager Roskilde University Denmark e-mail: kpp@ruc.dk
Data Editor:	Michaela Barnard, MHSC, University of Hull m.g.barnard@hull.ac.uk
Extent:	2,283 records
Keywords:	fishing catch statistics; History of Marine Animal Populations; Baltic Sea; Danish archives

Citation

(a) The dataset: please cite as follows: M. Bager ed., with L. Hansen, Per Jessen (researchers) 'Danish Baltic Catch Data, 1611-1920' in M.G Barnard & J.H Nicholls (comp.) *HMAP Data Pages* (www.hull.ac.uk/hmap)

(b) Supporting documentation: please cite as follows: M. Bager, 'HMAP Dataset 7: Danish Baltic Catch Data, 1611-1920, Supporting Documentation', in M.G Barnard & J.H Nicholls (comp.) *HMAP Data Pages* (www.hull.ac.uk/hmap)

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The research work of L. Hansen and Per Jessen, and the support and guidance provided by Henn Ojaveer, Brian MacKenzie and other members of the HMAP Baltic Steering Group, are gratefully acknowledged. The data were edited and rendered compatible with the HMAP and OBIS schema by the HMAP Data Pages team at Hull.

Contents

1. HMAP Baltic: Objectives

The aim of the Baltic Sea project is to identify the natural and human factors that interact to condition long-term ecosystem change. The historical source material is very rich (MacKenzie et al, 2002), and the ecosystem is very well covered by modern fisheries and oceanographic data. Nevertheless, the enigmas of understanding ecosystem dynamics, especially with regard to the occurrence and fluctuation of marine mammals, cod and herring, have long been recognized to warrant historical investigation. The challenge of political barriers and linguistic diversity has until recently made long-term studies difficult, but the Baltic team has successfully overcome these impediments and identified partners in all Baltic countries. The Baltic Sea team comprises Danish, Swedish, Estonian, Latvian, Russian and Polish researchers, and has generated datasets from a range of archival repositories, including those in Denmark discussed below.

See the following documents:

- Baltic HMAP Scientific Data Interpretation Report (http://www.hull.ac.uk/hmap/Downloads/Datasets/BaNoNoSHmap.pdf)
- Baltic Sea Fisheries in Previous Centuries: Development of Catch data Series and Preliminary Interpretations of Causes of Fluctuations (http://www.hull.ac.uk/hmap/Downloads/Datasets/ICES_2002.pdf)

2. Danish Baltic Catch Database: Sources

(a) Danish Customs Accounts

The Danish customs accounts are one of the main sources of information relating to the commercial fishing industry in Denmark before 1889. The accounts contain information on fish products which were traded on a commercial basis from the ports of Denmark to both domestic and foreign markets.

Each customs district had one or more ports or places of disembarkation. The local customs officer controlled the traffic to and from the port and collected the customs duties. A comprehensive customs register (toldruller), with tariff rates, was established in the reign of King Christian IV (1588–1648). The enabling statutory instrument (12 January 1632) included instructions as to how customs officers should undertake surveillance and bookkeeping duties. This instrument became the basis of legislation in later years. Two main categories of customs duties were in use in the first half of the 17th century: the Oeresund toll and the toll for the Danish crown and country. The toll for the Danish crown was divided in four subgroups. 1. S*tor told* (the large toll) was mainly a duty on export of oxen from Denmark and on wood exports from Norge, but duty could also be imposed on exports of salted cod and herring to pay *stor told*. 2. S*måtold* (the small toll) was a duty on consumer goods imposed on most fish products, salted or smoked. 3. *Skt. Annæ told* was imposed on the import of salt and silk. 4. B*ådsmandsvåningspenge* was a toll paid by all vessels entering a Danish port. Fish products such as salted cod and smoked salmon were regarded as dutiable consumer goods though the entire period. Export of live cod was introduced in 1759 and soon buyer smacks with wells (opkøber kvaser) began plying between Bornholm and Copenhagen carrying live cod for the market in the capital. The trade was boosted by an exemption for the transport of live cod established by a statutory instrument of 24 December 1770. In the customs accounts the number of barrels of salted fish are listed. One barrel has a volume of 108.21 litres.

The customs accounts dating from before the mid- 19th century have only survived in limited numbers. Also, in the late 19th century the collection of Danish customs archives was reorganised and unfortunately a good deal of the records were discarded at that time. The number of surviving records varies from one customs district to another. In general there is no connection between the degree of preservation and the volume of the customs archive, as the size of the customs districts and the size of the local population were not uniform.

The contents of each customs archive reflect how the activities of the customs authorities changed over time. The customs accounts include a register of imported and exported goods, a register of ships entering and leaving the port, and sometimes also a list of local registered ships. Monthly or quarterly status reports were compiled until 1845, when a circular dated 25 February 1845 stipulated that these should be replaced by one annual report, which from 1878 onwards was made on a printed pro-forma. Throughout the period the accounts were audited yearly by the central customs authorities.

(b) Bornholm Customs Account (revised)

Revised Customs Accounts of Bornholm, Danish National Archive, Copenhagen
R.T.K. Rev. Regsl.r. Bornholm. Antegn. Ekstr.m.v. til Regnskaber for Told og Konsumtion m.v.
Volume: The Bornholm customs archive contains 19 record units, number from 1 to 19. Unfortunately three record units are missing and at present the records cannot be identified in the archive depot of the Danish National Archive (Rigsarkivet)
Period covered: 1663-1834.
Data extracted by Maibritt Bager
Customs accounts with list of export figures are preserved for the following years (some only in fragments): 1672-74, 1679-82, 1687-89, 1691, 1700, 1709-10, 1713, 1724-25, 1761, 1767, 1769, 1796, 1798, 1803, 1834.

(c) Rønneby customs account
S 1115-1116 microfilm collection Danish National Archive (Rigsarkivet), Copenhagen
Time period: 1614-1649
Data extracted by Maibritt Bager

(d) Kristianstad Customs Account
S 1120 microfilm collection Danish National Archive (Rigsarkivet), Copenhagen
Time period: 1610-1636
Data extracted by Maibritt Bager

(e) Åhus Customs Account
S 1120 microfilm collection Danish National Archive (Rigsarkivet), Copenhagen
Time period: 1610-1616
Data extracted by Maibritt Bager

(f) Ydstad Customs Account
S 1108-1109 microfilm collection Danish National Archive (Rigsarkivet), Copenhagen
Time period: 1606-1633
Data extracted by Maibritt Bager

(g) Bornholm Customs Account
Customs Accounts Bornholm, annually
Bornholm *Toldkammer* D1-4. Årsberetninger og indberetninger
The Country Archive Sealand, Lolland-Falster and Bornholm, Copenhagen
(Landsarkivet for Sjælland, Lolland-Falster og Bornholm, København)
Time period: 1838-1889
Data extracted by Jacob Svane, CMRH, University of Southern Denmark

(h) Helsingør Customs Account 1856-1889

Customs Accounts Helsingør, annually
Helsingør Toldkammer D1-6. Årsberetninger og indberetninger
Landsarkivet for Sjælland, Lolland-Falster og Bornholm
Data extracted by Lulu Hansen and Per Jessen

(i) The Danish Annual Fishing Report

'Fiskeri-Beretning' published by the Danish ministry of Agriculture (later the Ministry of Fisheries)
Time period: 1889-1920
Data extracted by Susanne Rosendahl Laursen

The Danish Annual Fishing Report was published by the Danish Ministry of Agriculture (later the Ministry of Fisheries) on an annual basis from 1889 and until 1977. The report contains information on fish landed on a commercial basis in all Danish ports during the period. The information was recorded port by port until the mid-1920s when the structure of the reports changed so that only landings in larger fishing districts were recorded.

A network of local informants provided the background material for the Fishing Reports. In the first years of the publication the method of estimation depended on individual informants, but the collection of information was systematised in the beginning of the 20th century as the informants were asked to use printed report forms.

The landing data from the ports of Bornholm has been digitised for the purpose of the Baltic Sea HMAP study for the period between 1889 and 1920. All fish species landed on a commercial basis on the island have been included in the database. No distinction has been made between economically or ecologically important species and those of lesser significance. All data available in the Fishing Report are included.

The unit of weight and numbers used in the Fishing Report changed during the period. Until 1911 quantities of Atlantic cod, Atlantic salmon, European eel, northern pike, sea trout, and turbot were primarily reckoned in pounds. However, in the same period Atlantic cod were also reckoned in score and turbot in pieces. From 1911 onwards all species, except for Atlantic herring, were reckoned in kilograms. Atlantic herring were rendered in ol until 1916 when this was changed to hectolitre for two years until 1918; subsequently Atlantic herring catches were also calculated in kilograms.

Units used	1889-1901	1902-1910	1911-1920
Atlantic cod – Gadus morhua	Pound (0,500 kilogram) Score (20 pieces)	Pound (0,500 kilogram)	Kilogram
Atlantic herring - Clupea harengus	Ol (80 pieces)	Ol (80 pieces)	Ol (80 pieces) Hectolitre (100 litre)
Atlantic mackerel- Scomber scombrus			Kilogram
Atlantic salmon – Salmo salar	Pound (0,500 kilogram)	Pound (0,500 kilogram)	Kilogram
European eel – Anguilla anguilla	Pound (0,500 kilogram)	Pound (0,500 kilogram)	Kilogram
Gar-fish Belone belone belone			Kilogram
Northern pike - Esox lucius	Pound (0,500 kilogram)	Pound (0,500 kilogram)	
Sea trout - Salmo trutta trutta	Pound (0,500 kilogram)	Pound (0,500 kilogram)	Kilogram
Turbot- Scophthalmus maximus	Pound (0,500 kilogram) Pieces	Pound (0,500 kilogram)	Kilogram

The Fishing Reports contain additional information on the number of vessels used in the fisheries. The Report distinguishes between vessels of different size. The categories of vessels used in the Fishing Reports between 1889 and 1902 were: buyer smackes (opkøber kvaser); well smackes (drivkvaser); deck vessels (dæksbåde); well dinghies (damjoller); and small vessels (mindre fartøjer). In 1903, the category 'motor fishing vessels' was added, and in 1910 'buyer smacks' was deleted from the list. The categories were simplified in 1912 when all vessels were grouped into three classes; motor fishing vessels, sailing fishing vessels, and rowing boats.

Categories Used

1889-1902	1903-1909	1910-1912	1913-1920
Buyer smackes (opkøber kvaser) Well smackes (drivkvaser) Deck vessels (dæksbåde) Well dinghies (damjoller) Small vessels (mindre fartøjer).	Buyer smackes Well smackes Deck vessels Well dinghies Small vessels Motor fishing vessels	Well smackes Deck vessels Well dinghies Small vessels Motor fishing vessels	Motor fishing vessels Sailing fishing vessels Rowing boats

The variation in the fishing fleet has not been included in the digitised data set, with only the total number of vessels being recorded. In the Fishing Report there is no distinction between vessels used for different fisheries; therefore the total number operating has been included in the dataset. This means that there is no necessary direct relationship between the numbers of vessels employed and the quantity of catches for different species given in the dataset. Accordingly, CPUE figures must be approached with caution.

3. Outputs

The data have been used to inform a number of analyses, including:

MacKenzie, B. R., Köster, F. W. 2004. Fish production and climate: sprat in the Baltic Sea. Ecology 85: 784-794

Ojaveer, H. and Andrushaitis, A. 2004. History of ecosystem studies in the Gulf of Riga. Proceedings of Estonian Academy of Sciences. Biology. Ecology 53/2: 116-143

Ojaveer, H., Eero, M. and Lankov, A. 2004. Microevolution of eelpout, *Zoarces viviparus*, in the Baltic Sea. Proceedings of Estonian Academy of Sciences. Biology. Ecology 53: 292-305

Ojaveer, H., Simm, M. and Lankov, A. 2004. Population dynamics and ecological impacts of the non-indigenous *Cercopagis pengoi* in the Gulf of Riga (Baltic Sea). Hydrobiologia 522: 261-269

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