

Een spiering uitwerpen om een kabeljauw te vangen

How and why the Dutch fished for cod 1818-1911



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¹ The picture on the front page is P0264 Collectie Museum Vlaardingen; Etching titled "Hoeker die zijn Beug uit zeit met en Vuije Zeijl" by Gerrit Groenewegen, 1789

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Conversion of Dutch weights and measures²

Dry measure

1 *Nederlandsche Last* = 30 hl

Length

1 *Nederlandsche el* = 1 m

1 *Amsterdamsche el* = 0,694 m

1 *Nederlandsche palm* = 1 dm

1 *Nederlandsche duim* = 1 cm

1 *Zuid-Hollandsche duim* = 2,75 cm

Weight

1 *Nederlandsche pond* = 1 kg

1 *Scheepston* = 1 t

1 *Scheepslast* = 2 t

The royal succession³

1813-1840 King Willem I

1840-1849 King Willem II

1849-1890 King Willem III

1890-1948 Queen Wilhelmina

The Dutch governments⁴

1815-1830

ministries of foreign affairs, home affairs, education, religious affairs, justice, finance, public works, defence, navy and colonies

1830-1848

ministries of foreign affairs, home affairs, religious affairs, justice, finance, public works, defence, trade and colonies, navy

1848

Cabinet of G Schimmelpennick (conservative)

1848-1849

² Griffith Richard T.; *Industrial Retardation in the Netherlands 1830-1850*; Den Haag 1979 p.XIV and Verhoef J.M.; *De oude Nederlandse maten en gewichten*; 1982 on metrical sources from before 1820 now available in a database along with sources from the *Afdeling Naamkunde en Nederzettingsgeschiedenis* at the *P.J.Meertens-Instituut* at the *Koninklijke Nederlandse Akademie van Wetenschappen*, KNAW accessible at <http://www.meertens.knaw.nl/mgns/> There were local variations within the standard measurements, and towns seemed to coordinate their preferences in groups: 1. Delfshaven, 's Gravenhagen, Katwijk, Noordwijk and Scheveningen 2. Delft, Rotterdam and Schiedam 3. Briel, Hellevoetsluis and Zwartewaal 4. Leiden 5. Maassluis and Vlaardingen 6. Middelharnis 7. Pernis (only towns relevant to fishing are mentioned)

³ Kossmann E.H.; *The Low Countries 1780-1940*; Oxford History of Modern Europe, 1978 Appendix I

⁴ Kossmann E.H.; *The Low Countries 1780-1940*; Appendix II

Cabinet of D Donker Curtis (liberal)

1849-1853

Cabinet of J R Thorbecke (liberal)

1853-1856

Cabinet of A van Hall (conservative liberal)

1856-1858

Cabinet of J J L van der Bruggen (conservative)

1858-1860

Cabinet of J J Rochusen (liberal conservative)

1860-1861

Cabinet of F A Hall (conservative liberal)

1861-1862

Cabinet of J P P van Zuylen van Nijvelt (conservative)

1862-1866

Cabinet of J R Thorbecke (liberal)

1866

Cabinet of I D Fransen van de Putte (liberal)

1866-1868

Cabinet of Mijer-van Zuylen-Heemskerk (conservative, conservative anti revolutionary Calvinist, conservative liberal)

1868-1871

Cabinet of Bosse-Fock (liberal)

1871-1872

Cabinet of J R Thorbecke (liberal)

1872-1874

Cabinet of De Vries-Geertsema (conservative liberal, liberal)

1874-1877

Cabinet of J Heemskerk (conservative)

1877-1879

Cabinet of J Kappeyne van de Copello (liberal)

1879-1883

Cabinet of C T van Lynden van Sandenburg (anti-revolutionary Calvinist)

1883-1888

Cabinet of J Heemskerk (conservative)

1888-1891

Cabinet of A E Mackay (anti-revolutionary Calvinist)

1891-1894

Cabinet of G van Tienhoven (liberal)

1894-1897

Cabinet of J Roëll (liberal)

1897-1901

Cabinet of N G Pierson (liberal)

1901-1905

Cabinet of Kuyper (anti-revolutionary Calvinist)

1905-1908

Cabinet of T H de Meester (liberal)

1908-1913

Cabinet of T Heemskerk (anti-revolutionary Calvinist)

Een spiering uitwerpen om een kabeljauw te vangen

The title of this thesis is one of several Dutch proverbs or sayings stemming from fishing business. It means “sacrificing little to obtain a lot” or “throwing out a sprat to catch a whale”, emphasising Dutch maritime culture in comparison to other Europeans with proverbs or sayings of similar meaning, but different origin. Some of these are:

Driemaal is scheepsrecht (third time lucky, alle gode gange tre)

Tussen waal en schip raken (fall between two stools, sætte sig mellem to stole)

Dat loopt de spuigaten uit (go too far, det går for vidt)

De prikken levend houden (pull through, klare skærene)

Zich als een vis op het droge voelen (feel like a bull in a china shop, føle sig som en hund i et spil kegler)

Boter bij de vis (cash payment, kontant afregning)

Preface

Fishing history is a special kind of history because it reaches out to many different professional specialisations. In 2002-2003, a group of natural scientists invited historians to join their research project by writing doctoral theses on fishing history, and I was one of the historians invited to take part. In broad terms, the objective was to find out if there were any historical evidence of the decline in the cod stock in the North Sea, or more specifically, “to understand how fisheries and variability in the marine ecosystem affect North Sea fish populations, and how these interactions affect coastal communities.” A second component was “to collect fisheries data like landings or prices on fish from countries bordering the North Sea.” A third component was “the understanding of the fish population dynamics and the statistical analysis of the data.”⁵

I did not foresee the difference in sources, methodology, and means and ways of publishing work between the natural sciences and the humanities causing problems. Generally speaking, the former explains while the latter understands.⁶ The scope of the thesis depended on the archival material available, and from a historical point of view, I found the French sources and their landings on cod interesting, but the French reported their catch in the North Sea and near Iceland together in one figure, while they are two different species. This excluded France from my thesis for a natural scientific reason. The Dutch barely fished for cod near Iceland, and their landings distinguished between data from the North Sea and Iceland. Therefore, this became a thesis on Dutch cod fishing in the North Sea in the 1800s.⁷ Few historiographical articles on maritime history refer to research on Dutch cod fishing in the 1800s. Most Dutch fishing history is on herring fishing.⁸ It left me with the opportunity to write new history. I researched the biological circumstances in relation to the cod fishing, and the calculations for estimating fish stocks, but my experience as a historian entitles me to write a historical thesis.

⁵ www.conwoy.ku.dk/index.html from where Brian MacKenzie and Poul Holm led the group on fishing history in coordination with www.coml.org/projects/history-marine-animal-populations-hmap and www.hull.ac.uk/hmap/hmapcoml.org/History%20of%20Marine%20Animal%20Populations.swf

⁶ Myrdal Janken; *Om humanvetenskap och naturvetenskap*; Sveriges Lantbruksuniversitet, Rapport 159, Uppsala 2005

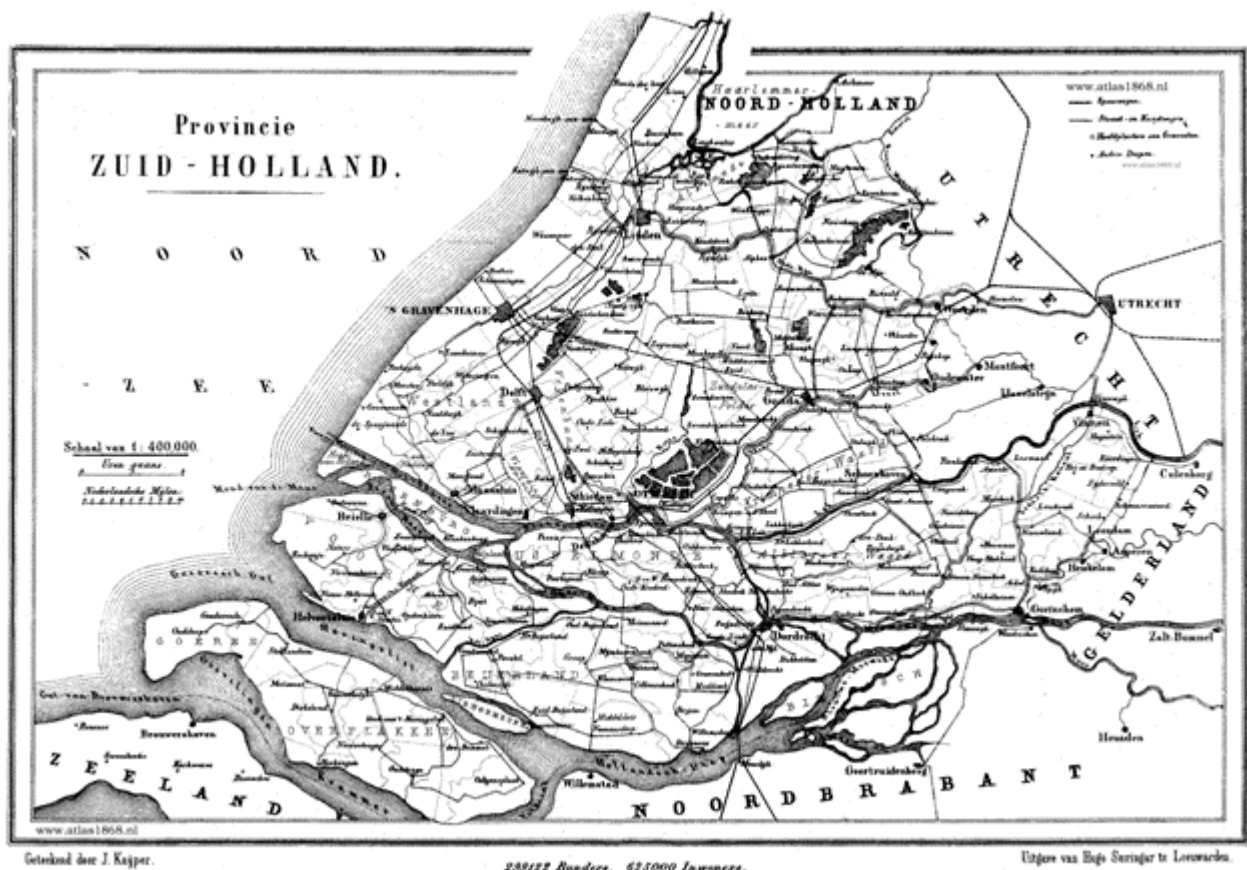
⁷ Thanks to Tim Smith's understanding of the workload and the requirements applied to learning a new language while writing a doctoral thesis, the English cod fishing was left for the English to consider.

⁸ Bruijn Jaap R.; *Dutch Fisheries: An Historiographical and Thematic Overview*; The North Atlantic Fisheries, 1100-1976, National Perspectives on a Common Resource; NAFHA, Studia Atlantica, vol.1 p.105-120 and Acda Gerard, Heijer Henk den, Vliet Adri van; *Twee eeuwen maritieme geschiedschrijving in Nederland*; Tijdschrift voor zeegeschiedenis, 2008, vol.27 p.3-17 and Voort Jan P. van de, Poldervaart Alex; *Visvijvers voor historici. Bronnen voor visserijhistorisch onderzoek in Nederland*; NETwerk, Fish, War and Politics 1300-2003, International Conference, Jaarboek 15, p.90-99, Visserijmuseum, in cooperation with NAFHA, Studia Atlantica vol.7, 2004 and Voort Jan van de; *De Visserijdocumentatie van het Visserijmuseum 1962-2002*; NETwerk Jaarboek Visserijmuseum,13, 2002 p.67-78

I would like to express my admiration to Poul Holm and Brian MacKenzie for inviting me to join their research project and my apology for leaving. I would like to thank the international group of researchers engaged in the fishing history networks: History of Marine Animal Populations, HMAP, North Atlantic Fisheries History Association, NAFHA and International Maritime Economic History Association, IMEHA for sharing their knowledge with me and facilitating my participation in international conferences and workshops. In particular, I would sincerely like to thank Tim Smith for his diplomacy, and Jan Parmentier for facilitating my work when and wherever possible. I would like to thank Femme Gaastra and Henk den Heijer for their kindness; also, I am grateful to Rob Robinson and H. Buisman (alias University of Leiden) for allowing me to reproduce their data. I thank the maritime museums and the fishing museum in The Netherlands for assisting with information and material on cod fishing; I mention Jeroen ter Brugge, Irene Jacobs, Jan van der Voort and Alex Poldervaart for their help and interest in my work. I am grateful to the Dutch museums and archives for being in the forefront in digitizing material making research possible from a distance.⁹ I am also grateful to the staff at the national archive in The Haag and the local archive in Vlaardingen for being very helpful indeed, especially Arthur Mientes and René Janssen in The Haag and Erika Verloop and Harm Jan Luth in Vlaardingen. I like to thank the Gemeente Archief in Rotterdam, Maritiem Museum Rotterdam, Zeeuws Archief in Middelburg, Gemeente Archief in Vlissingen, Internationaal Instituut voor Sociale Geschiedenis in Amsterdam, Stadsarchief in Brugge and Rijksarchief in Ghent for supplying me with information. I am happy to thank Chris Browne and Lærke Sanderhoff for sharing their artistic approach to fishing and the women's strictly business network for immediate support and advice.

I would like to thank the Department of History at the University of Southern Denmark in Odense for providing me with access to an office all along, the IT department at the University of Southern Denmark for continuous support and upgrading of my laptop; and the librarians at the University library at the University of Southern Denmark in Odense for their admirable ability to meet my requests on foreign literature. Certainly, I would like to thank Per Boje and Per Grau Møller for commenting on my draft for this thesis, Kristen Barfod for support on statistics, Byrne McLeod for proof reading my English and Montacer Ben Cheikh for assisting me with the databases and calculations and concerns in general working on a doctoral thesis. There are many kind, knowledgeable people not mentioned, whom I met along the way, and who inspired my approach. I hereby express my gratitude hoping the result may be of interest to you.

⁹ See for example www.maritiemdigitaal.nl and www.ecomare.nl and <http://balie.vlaardingen.nl/isis/> and Brugge Jeroen te; Een digitale encyclopedie voor de Nederlandse zeevisserijgeschiedenis; Netwerk: Jaarboek Visserijmuseum, 2005, vol.16, p.55-59



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¹⁰ See www.atlas1868.nl The map shows the province Southern Holland in The Netherlands in the second half of the 1800s. There are the coastal fishing towns Scheveningen, Katwijk aan Zee and Noordwijk aan Zee with access to their inland markets, 's Gravenhage and Leiden. The river Maas is the the upper narrow river with the straight Nieuwe Waterweg Kanaal as mouth to the sea. Along the river are the fishing towns relevant to cod fishing in the 1800s: Vlaardingen, Maassluis, Zwartewaal and Pernis. The town Middelharnis is situated on the island Goerre Overflakkee, facing the island Voorne and the Voorne Kanaal crossing the island, built by king Willem I to facilitate access to the Maas and Rotterdam.

Introduction

In his book: “Scaling Fisheries”, Tim Smith starts by saying that

*“The scientific study of the variability of the catches of fish has not, however, progressed in proportion to its importance. Rather, it has developed in fits and starts depending on the specific problems that gained sufficient political attention.”*¹¹

In other words, fishing and its effect on the fish stock require different attention than is the case. The reason, Tim Smith argues, is that in spite of the fact that scientific theories have developed, they are not easily comprehended, in part because of a lack of understanding of the historical background. Tim Smith’s book then explains the theories by placing them in a historical context.

When working on this historical thesis, I found that what is interesting about the development in Dutch cod fishing in the 1800s is that it evolved in reverse order to the evolution of today. Now, the old perspective is the perspective focusing on (maximizing) catch rates, whereas in the 1800s this was the new perspective. Today, the new perspective is focusing on (coherent) ecosystems and human systems, while in the 1800s this was rejected as old-fashioned by the judicial reforms.¹² One wonders, if this development is the result of a lack of historical understanding. The history of Dutch cod fishing deals with the fishers as well as the institutions and the administration of fishing and throws light on the difference between cod and herring fishing, as herring fishing was strictly regulated, while cod fishing practised under comparably few rules. Most of the time, captains and fishers fished for cod as well as for herring, so how could they trust each other when fishing for cod, but not when fishing for herring?¹³ The reason given is usually that the Dutch must secure their branded herring to compete on the market, but they exported their salted cod without similar monopolistic protection. It seems the Dutch ship owners decided on this heterogeneity in their managing their access to the common-pool resources themselves.¹⁴ This resembles what today is known as co-management, so is it possible to use the historical material as a source of inspiration for future “aspirations for a

¹¹ Smith Tim D.; Scaling Fisheries, The Science of Measuring the Effects of Fishing, 1855-1955; Cambridge University Press, 1994, p.2

¹² Charles Anthony; Sustainable Fishery Systems; Blackwell 2000

¹³ Ostrom Elinor, Gardner Roy, Walker James; Rules, Games and Common-Pool Resources; The University of Michigan Press 1994 and Ostrom Elinor, Walker James ed.; Trust and Reciprocity, Interdisciplinary Lessons from Experimental Research; Russell Sage Foundation 2002

¹⁴ Keohane Robert O and Ostrom Elinor; Local Commons and Global Interdependence, Heterogeneity and Cooperation in Two Domains; Sage Publications 1995

balance of resource conservation and human concerns"?¹⁵ I answer these questions together with a historical perception of the questions in the original proposal combining the quantitative catch data with qualitative information on its historical context.¹⁶ As mentioned, I had problems applying the scientific modelling to my historical methodology, but I am not the only one struggling with biological terms and results. So did the fishers in the 1800s. I shortly explain how biologists work when studying the cod and cod fishing in order to facilitate understanding the history of Dutch cod fishing in the 1800s. I place cod fishing, at sea and near the coast, in an institutional analysis development framework with the objective of seeking inspiration for future sustainability. Doing this, I also write the history of Dutch cod fishing at sea and near the coast in the 1800s, as there is no such history yet. The Introduction deals with part of history prior to the 1800s, the sources, the methodology and the biological data, convenient for understanding the subsequent chapters on Dutch cod fishing and Dutch fishers in the 1800s.

Dutch cod fishing prior to 1800

Fishing for cod at sea

At the beginning of the 1800s, the fishers fishing for cod at sea used either a *hoeker* vessel or a *sloep*. In the Golden period, the *hoeker* was used for fishing, shipping and convoying. It appeared in the 1300s and was in use more or less till the end of sailing in the 1900s. It had a round front, a steep stern, two masts a big one, and a small one, and a strong keel, and it was a good windward performer. The *sloep* was introduced to the Dutch just after 1800. It had a sharp front, an identical stern, and one mast. It was slim and manoeuvrable and fit for long line cod fishing, especially when supplied with a *bun* basin for the fresh cod to be kept alive. The *sloep* was similar to the *logger*, introduced almost 60 years later, revolutionizing Dutch fishing.¹⁷ Both vessels employed twelve men in cod fishing. Line fishing, in Dutch *hoekwant*, was the means of fishing for cod in the Golden period. There were two ways of line fishing, *kolvisserij* and *beugvisserij*.

¹⁵ This consideration was applied in a job application for Oxford University, and in proposals for the FRESH seminar in Copenhagen 2010, and the IMEHA conference in Ghent 2012. Some historians/scientists seem to have copied it for their work...? Charles Anthony; *Sustainable Fishery Systems*; p.186

¹⁶ See **The questions and the arguments** in the part on **Methodology** in the **Introduction**

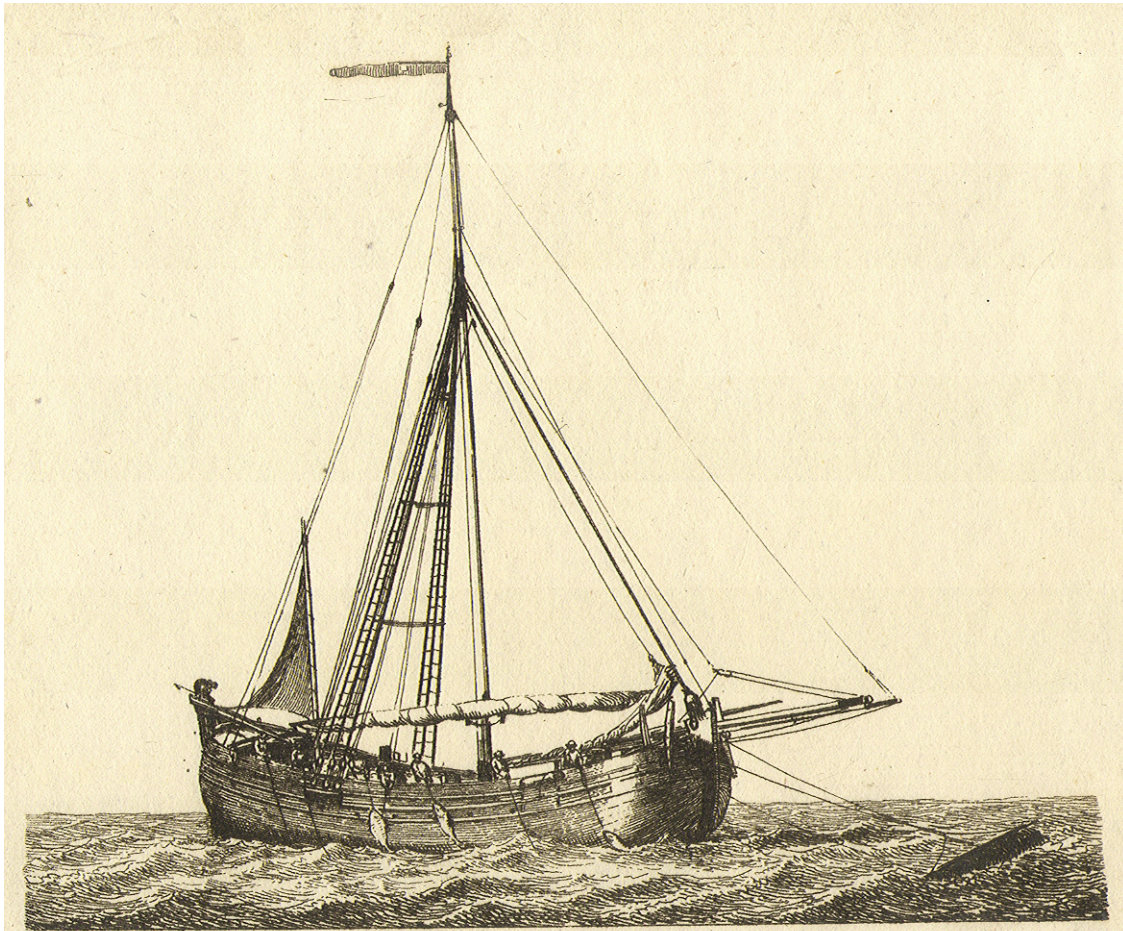
¹⁷ Haalmeijer Hans, Vuik Dik; *Buizen, Bommen, Bonzen en Botter, Zeilschepen van de Lage Landen – De visserij-*; Uitgeverij De Alk BV, 2007, p.75-80,128-133



The latter consisted of hundreds of lines of about 1-2 meter with baited hooks at the end of the line.¹⁹ These lines attached to fewer, but longer lines of 1-2 km, lying along the bottom of the sea overnight using small anchors, floaters and flags. The former consisted of single lines, each with a baited hook, attached to the side of the vessel, guarded by the fishers onboard the vessel, during daytime. *Kolvisserij* was suitable for fishing near Iceland and took place during Summer, whereas *beugvisserij* was preferable when fishing in the North Sea and took place during Winter.

¹⁸ P0298 Collectie Museum Vlaardingen; Etching titled "Hoeker die zijn Beug inzeilt en Cabbelijaauw vangt" Gerrit Groenewegen, 1789 shows how the long lines (beuglines) catching the cod are drawn in

¹⁹ See **Freedom was not always what it seemed to be** including photos of hooks for *hoekwant* visserij



D Hoeker die om Cabbelijauw vist met de Kol.

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It was the way of fishing at the beginning of the 1800s as well. In the Golden period, cod were cured and salted in barrels on board the vessel at sea, using either Portuguese or French salt. It was also the case in the 1800s. The fishers's income depended on the catch during the Golden period as well as in the 1800s. In 1575, the authorities imposed a consumption tax of six *stuivers* on fresh cod landed from March to July, and two years later, they were prohibited from selling their catch anywhere except at markets in Holland, yet this was not respected, and it was difficult to control.²¹ It seems the fishers brought their fishing gear themselves, but by the 1800s, it was part of rigging the vessel and therefore the ship owner's liability.²² Shared ownership was the common way of financing a *hoeker* vessel in the Golden Period. Usually, the captain held shares along with other persons in fishing business such as rope- or sail- makers, but as the economy flourished and fishing business proved successful in the 1600s, more people with no personal

²⁰ P0263 Collectie Museum Vlaardingen; Etching titled "Hoeker die om Cabbelijauw vist met de Kol" by Gerrit Groenewegen, 1789 shows how the fishers fished for cod individually leaning over the rail of the bulwark

²¹ Beaujon A.; *Overzicht der Geschiedenis van de Nederlandsche Zeevisscherijen*; p.25,30,47

²² Kranenburg Hendrik Adriaan Henri; *De Zeevisscherij van Holland in den Tijd der Republiek*; proefschrift Nederlandsche Economische Hoogeschool te Rotterdam, Amsterdam 1946, p.19-21,101-105

connections to fishing invested in shares as pure investment. Some ship owners stopped splitting the ownership of the vessel into shares to ease the financial burden and the risk of ownership, while instead managing their vessels at their own risk. This kind of private ownership lasted into the 1800s along with shared ownership in family business.²³

Fishing for cod along the coast

In the beginning of the 1800s, the fishers fishing for cod along the coast used a *bom* vessel, also called a *pink* or a *zijdse bom*. In the Golden Period, the *bom* was used for *hoekwant* and *schrobnet* fishing. It is uncertain when it first appeared, but it was in use more or less until the end of sailing in the 1900s. It had a square form, a flat bottom, and a storage of 14-18 herring tons. The *bom* had two masts and a crew of 6-8. It was for fishing near the coast, so it was not easily manageable at sea. This changed in the latter half of the 1800s when the ship owners made the *bom* a little bigger.²⁴



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During the Golden Period, the coastal fishers fished for herring or tarbot near the English coast, while the sea fishers fished for herring at sea near Scotland. Unlike the sea fishers, the coastal fishers landed their catch in England, or they had to smoke their herring when

²³ Kranenburg; *De Zeevisserij van Holland in den Tijd der Republiek*; p.62-71,96-101 and Wit Annette; *Leven, werken en geloven in zeevarende gemeenschappen, Schiedam, Maassluis en Ter Heijde in de zeventiende eeuw*; Amsterdam 2008, chap.4

²⁴ Haalmeijer, Vuik; *Buizen, Bommen, Bonzen en Botter*; p.33-36 and 112-116

²⁵ P0022 Collectie Museum Vlaardingen; Gravure titled "Pincks Scheveling" by Charles G Lewis after a drawing by Edward W. Cooke, 1853

they returned to the Netherlands. The authorities made an official distinction between smoked and salted herring in 1656, prohibiting the coastal fishers from landing salted herring in the Netherlands at all. This was the beginning of a long controversy between the sea fishers and the coastal fishers lasting well into the 1800s. A combination of lack of compliance by the coastal fishers, competition from the Flemish fishers and an introduction of financial support to the English coastal fishers urged the sea fishers to convince the authorities they must receive financial support to sustain their industry.²⁶ In 1775, the herring sea fishers were granted a *premie* of 600 *guilder* per vessel per season, plus 1 *guilder* per ton herring. In return, the sea fishers were prohibited from smoking their herring. In 1788, the coastal fishers obtained a *premie* of 200 *guilder* per season per vessel when fishing for herring along the coast, and the fishers fishing for cod near Iceland got a *premie* of 500 *guilder*.²⁷ Whaling also had their share, yet there is no evidence that cod fishing in the North Sea took part or succeeded in the request for financial support by the end of the Golden Period. The *premie* became a big issue in the 1800s, manifesting the old controversy. The coastal fishers used long line when fishing for cod, and nets when fishing for flatfish and herring. In 1676 came a prohibition against the use of *schrobnets* in coastal fishing because of an increase in catch of juveniles, but already in 1689 the prohibition was withdrawn because of protests and infringing.²⁸ Prohibitions were not re-introduced until the 1800s, therefore coastal fishing declined by the end of the Golden Period. The coastal fishers returned from fishing the same day or within a few days at the most, supplying fresh flatfish or cod. In the Golden Period as in the 1800s, they landed on the beach because there was no homeport. Their wives then sold the fish in the streets or at the fish market in nearby towns. This was important as the coastal fishers were paid in kind. The authorities made rules on the kind of fish to sell, *vrouwenvis*, and those for the fishers to keep for them to eat, *zoodevis*. Pay in kind remained during the 1800s.²⁹

²⁶ Parmentier Jan; In de wereld is niets volmaekt; de evolutie van de Zuid-Nederlandse visserij in relatie tot de Zeeuwse en Hollandse invoer tijdens de achttiende eeuw; Archief, Mededelingen van het Koninklijk Zeeuwsch Genootschap der Wetenschappen, 2003 p.31-62 and Kuiper Marco; Vissers en Ventjagers, De visserij van Middelharnis gedurende de achttiende eeuw; MA thesis, Leiden Universiteit, 10.06.2011, chap.4

²⁷ Thomas Simon M.; Onze Ijslandsvaarders in de 17de en 18de Eeuw, Bijdrage tot de Geschiedenis van de Nederlandsche Handel en Visscherij; proefschrift Rijksuniversiteit te Utrecht, 1935, p.224

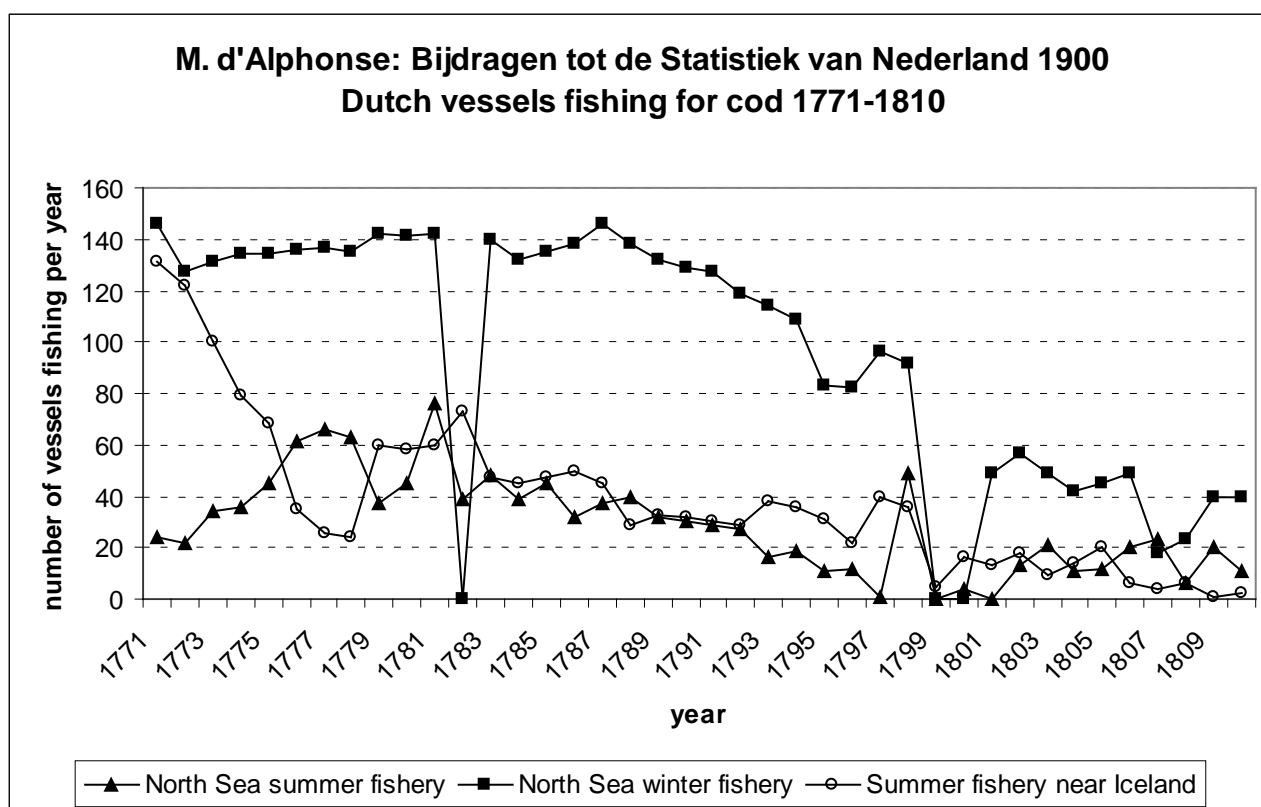
²⁸ Beaujon A.; Overzicht der Geschiedenis van de Nederlandsche Zeevisscherijen; p.101-105,145-148,162-175

²⁹ Stegeman Jannie; Scheveningse visverkopers ca. 1600-1900; Holland: Historische Tijdschrift; Historische Vereniging Holland, Harlem; 1989, vol.21, p.38-53 see also Wit; Leven, werken en geloven in zeevarende gemeenschappen; chap.6 or Heuvel Danielle van den; Women & entrepreneurship, Female traders in the Northern Netherlands c.1580-1815; Amsterdam 2007, chap.3 for a description of women selling fish in the Golden Period

The sources

French records and Dutch comments

Several sources tell the story about cod fishing in the 1800s. A French attendant of domestic affairs, M. d'Alphonse collected statistics on cod fishing in 1811, covering the period 1771-1810.



These statistics provide information on the number of vessels from Vlaardingen and Maassluis fishing for cod in the North Sea and near Iceland.³⁰ d'Alphonse described the overall size of vessels and crew, the time spent at sea fishing, and the costs and revenue when fishing for cod. Unfortunately, his statistics show no catch data, nor do they tell anything about the use of fishing gear, but they mention the location of fishing:

*“La pêche a lieu pendant l’été et pendant l’hiver et elle se fait dans la mer du Nord à la hauteur du Doggersbank, tantôt à droite, tantôt à gauche de ce banc à une distance de 30 ou 40 lieues de la côte.”*³¹

d'Alphonse himself was amazed by the decline in number of vessels fishing for cod between 1771 and 1810. He suggested war being the reason. The statistics came about

³⁰ d'Alphonse M.; *Bijdragen tot de Statistiek van Nederland Uitgegeven door het Centraal Bureau voor de Statistiek, eenige hoofstukken uit het Aperçu sur la Hollande présenté à S. E. le Ministre de l'Intérieur, comte de l'Empire*; Nationaal Archief den Haag: 's Gravenhage 1900, nieuwe volgrees no.1, p.328-331

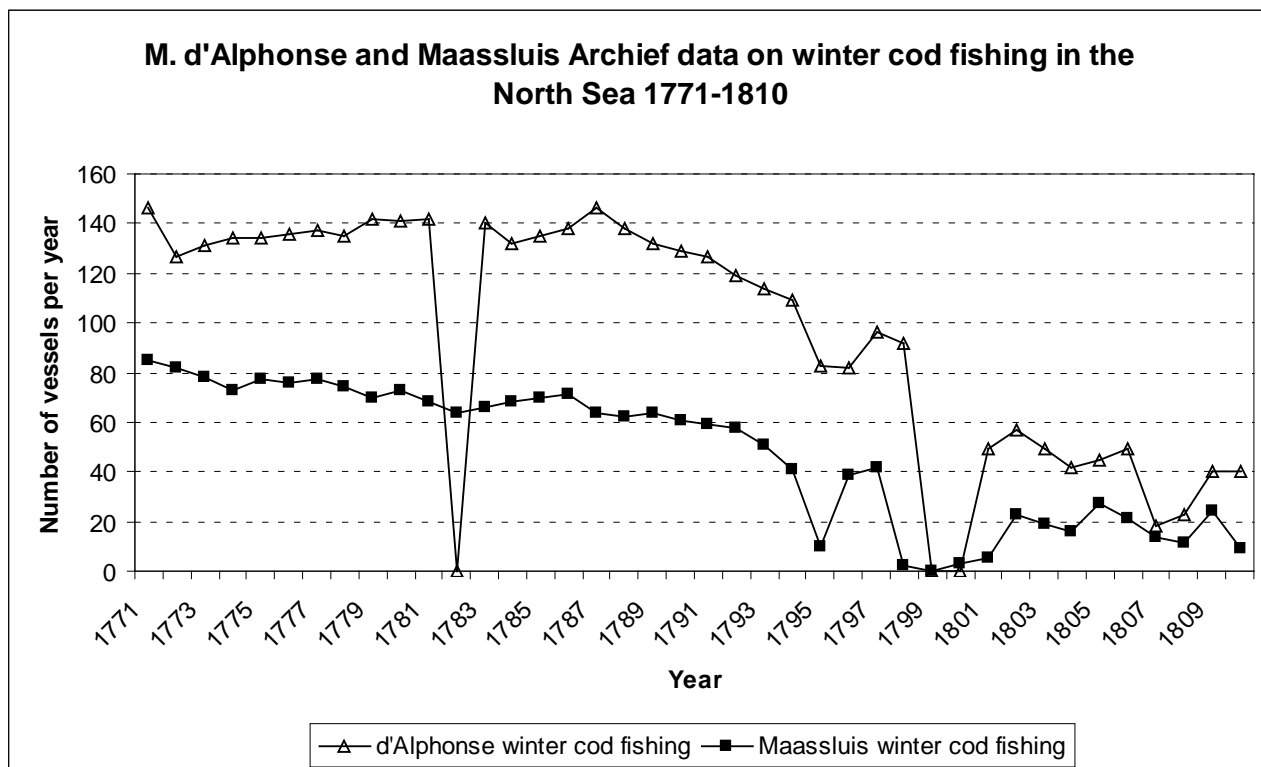
³¹ *Bijdragen tot de Statistiek van Nederland*; p.328

as a request for information on Dutch fishing business by Napoleon when the fishers in Holland asked for permits for herring fishing in the North Sea.³² The statistics were “de facto” statistics, but they included no information on the coastal fishing. They became the basis of Napoleon’s decree including North Sea and coastal fishing.³³ The fishers did not like Napoleon’s restriction of one month imposed on their time spent at sea, nor his prohibition against landing catch in other ports but their homeport. This would not so much harm cod fishing in the North Sea or near the coast, as it prevented the coastal fishers from landing fresh herring in England and the sea fishers from reaching their fishing grounds up the Scottish coast. They did not fear the English even when at war as much as they detested the French when hindering their business. The fishers had a different perception of the reason for the decline in numbers of vessels fishing, suggesting failed attempts of fishing, jealousy from other peoples, high price on necessities, high tax on Dutch goods in foreign countries reducing the price obtained by the fishers, and finally the long and destructive war as decisive. The English captured some vessels, and the Dutch or the French engaged some fishers in their navy. Some fishing vessels were stuck in ports in foreign countries like Norway, and some voluntarily changed homeport to continue business under different flag.³⁴ These events had an impact on the decline in fishing indicated on d’Alphonse statistics. Therefore, it is misleading to use these statistics as a basis for a calculation of the cod stock at the time, knowing the local ship owners moved the registration of their vessels and crew elsewhere while fishing for cod at the same spots at sea. The ship owners in Maassluis registered their fishing vessels independently, before as well as after the French occupation and the records still exist. Apart from distinguishing between herring fishing and cod fishing in the North Sea and near Iceland, they tell the name of the ship owner, the captain and the vessel. They did not mention the catch data either.

³² Vermaas J.C.; *De Haringvisserij van 1795 tot 1813*; p.144-151

³³ Vermaas J.C.; *De Haringvisserij van 1795 tot 1813*; p.155-163

³⁴ Kees Zijlstra; *Shipperen in de Franse tijd*; Jaarboek Fries Scheepvaartmuseum en Oudheidkamer, 2003, p.52-60 and Parmentier Jan; *Vlaardingse vissers onder Zuidnederlandse vlag, 1781-1783*; Netwerk, 1996, vol.7, p.7-26 and Romburg C.P.P. van; *Visserij in oorlogstijd*; p.7-20



³⁵ M. d'Alphonse collected information on cod fishing in the North Sea from ship owners in Vlaardingen and Maassluis. Maybe, if subtracting the number of vessels in Maassluis from the number of vessels in d'Alphonse's statistics it equals the number of vessels from Vlaardingen, but it is hypothetical.

The records on financial support for cod fishing at sea 1818-1853

The French resigned in 1813, leaving the Netherlands to form a kingdom of the former federal republics under King Willem I. Cod fishing was renewed, yet the intermezzo had had an impact on the cod fishers. The French permission to fish for cod had not made up for the financial loss by the prohibition against herring fishing. Contrary to the attitude in the 1700s, bad times made the ship owners claim a *premie* to cod fishing in the North Sea and later to cod fishing along the coast.³⁶ The ship owners' applications for *premie* for cod fishing in the North Sea included names of each ship owner and vessel. They told the first day of departure at the beginning of the season and the last day of arrival by the end of the

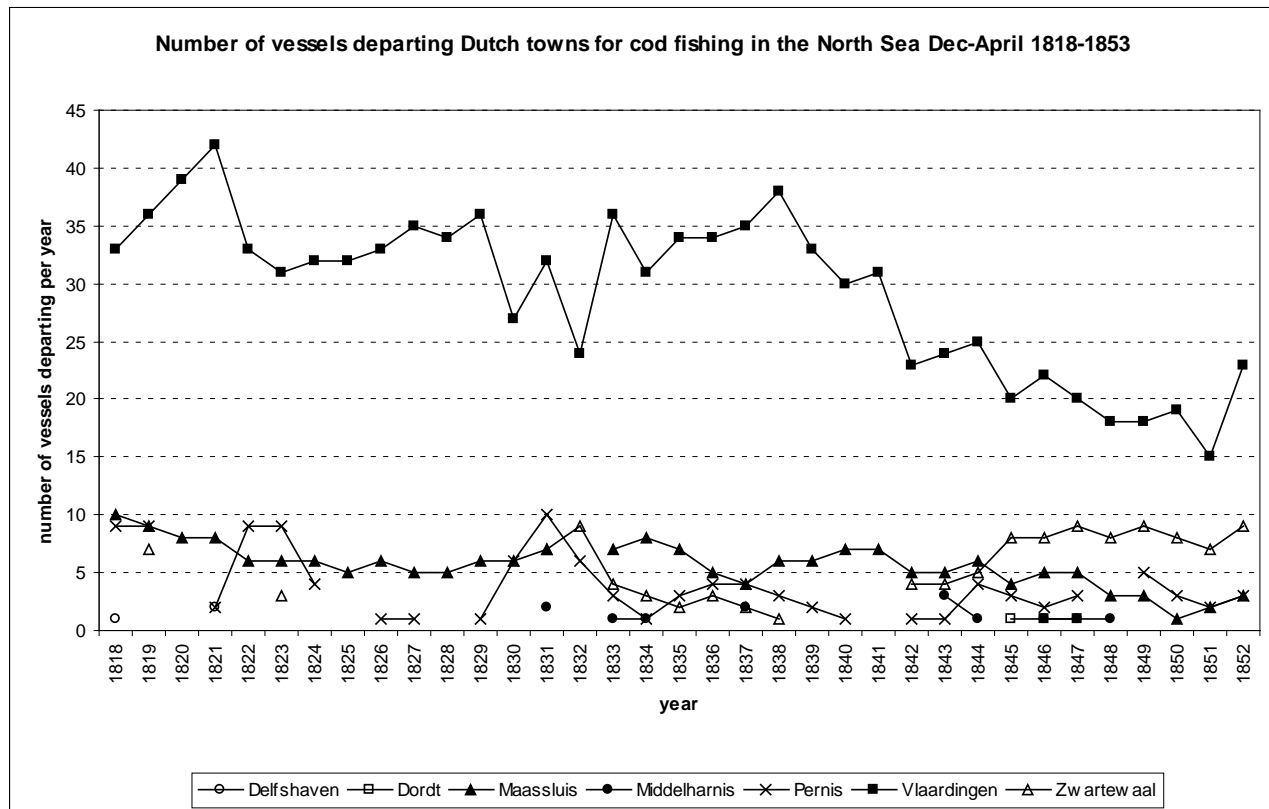
³⁵ Nationaal Archief den Haag: d'Alphonse M.; *Bijdragen tot de Statistiek van Nederland*; Centraal Bureau voor de Statistiek, 's Gravenhage, 1900, nieuwe volgrees no.1, p.328-331 and *Lijsten an alle zodanige Schepen als te visschen zijn uitgevaren van Maas-Sluijs het zij naar de Noordzee, Ysland of ten Haring die vrij zijn van s'Lands Impost opgegeven door Gecommitteerden van de Visscherij te Maas-Sluijs Sedert den Jare 1763*; Locaal Archief Vlaardingen, no.490 for a comparison of data on North Sea cod fishing registered by d'Alphonse and the Maassluis ship owners and Appendix 1 note 35 on the change in names of the Maassluis vessels from 1763-1826

³⁶ The cod fishers's application for *premie* constitutes the sources on cod fishing in the North Sea from 1818-1853 and near the coast from 1825-1853, see Nationaal Archief den Haag; 3.11.05 and 3.11.04

[illegible]

Ship owners having vessels fishing for cod in the North Sea applied for and received *premie* on an annual basis from 1818 to 1853. These statistics differed from contemporary statistics on Dutch trade in their continuity, specificity and practicability, having been saved for posterity by the bookkeeper who recorded the catch and the comments at the time.

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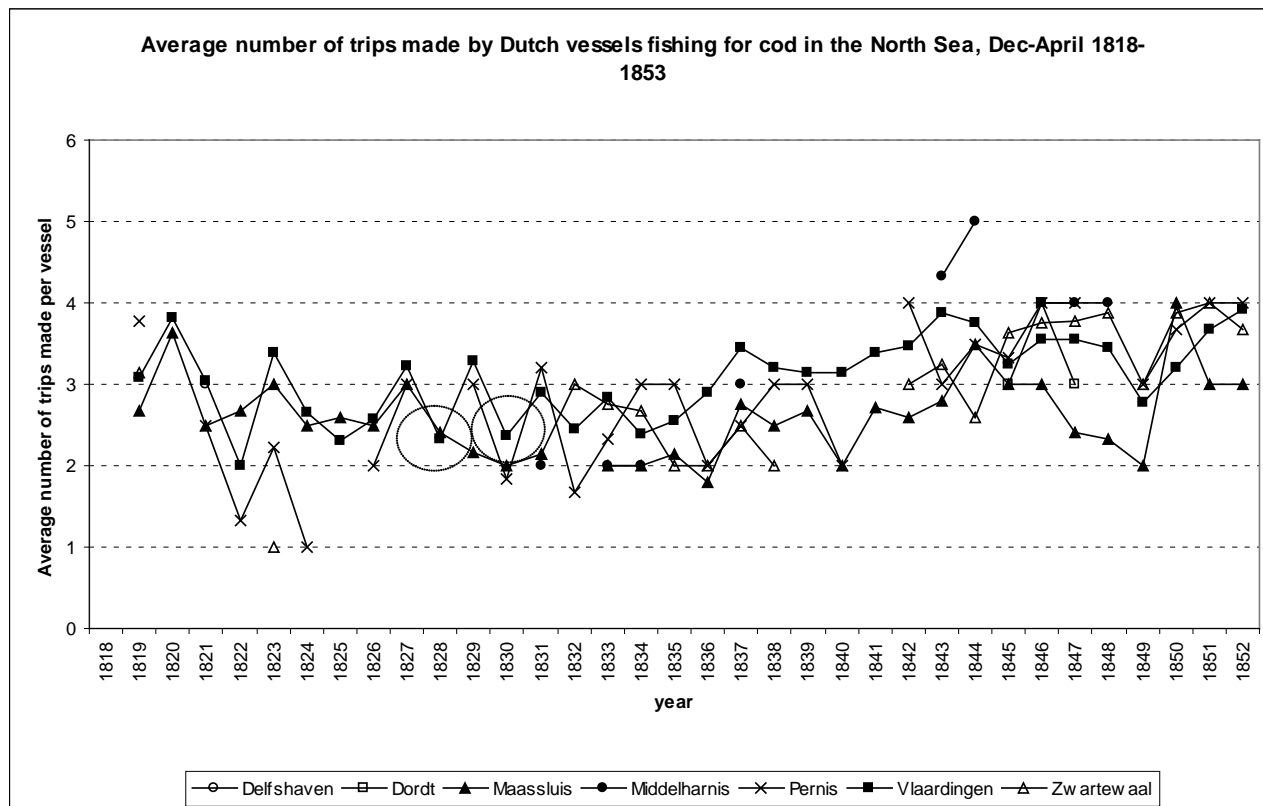
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Reading the records on financial support

The data fluctuated because of societal changes, as did d'Alphonse's statistics, but the catch data also varied. When looking at the number of vessels departing each season one gets an image of a steady decline with vicissitudes in certain years indicating possible increase or decrease in catch rates. This was not necessarily the case. In the winter of 1828-29 vessels left for sea before the river Maas closed because of ice. Unfortunately, they could not return to their homeport with the cod they caught. Instead, they landed their catch in coastal towns and bought necessities for their next trip. Because the bookkeeper only registered catch landed in the homeport, this meant that the actual number of trips made that winter did not correspond with the number or the catch stated in the application for *premie*, similar to the present incident prior to the collapse of the cod stock in Canada. In the winter of 1830-31, vessels did not make it to sea before the river closed by ice. Their delay was more than a month and they caught respectively less. In the application, their number of trips almost corresponded with the trips made by the fishers during the winter of 1828-29, while in 1830-31 they actually caught less, and in 1828-29 more than stated. This

³⁸ Ship owners from Vlaardingen, Maassluis, Middelharnis, Zwartewaal, Pernis, Delfshaven and Dordt had vessels fishing for cod in the North Sea applying for and receiving *premie*, Nationaal Archief den Haag, toegang no.3.11.05 inv.1-2

variability in catch data shows only when combining the quantitative data with the qualitative data from the bookkeeper's notes. These are not outstanding examples.



³⁹ Looking at the number of trips per season one gets an overall impression of a slight increase. Thinking of the decline in number of vessels, one wonders if the vessels caught less and therefore made more trips to keep business running or did they make more trips to profit from good catch? Standard calculations provide an overview of the performance of the Dutch cod fishing from 1818-1853.⁴⁰ It is possible to tell which towns had the most vessels fishing for cod, and if the vessels generally performed on average or they just had a lucky ride occasionally.

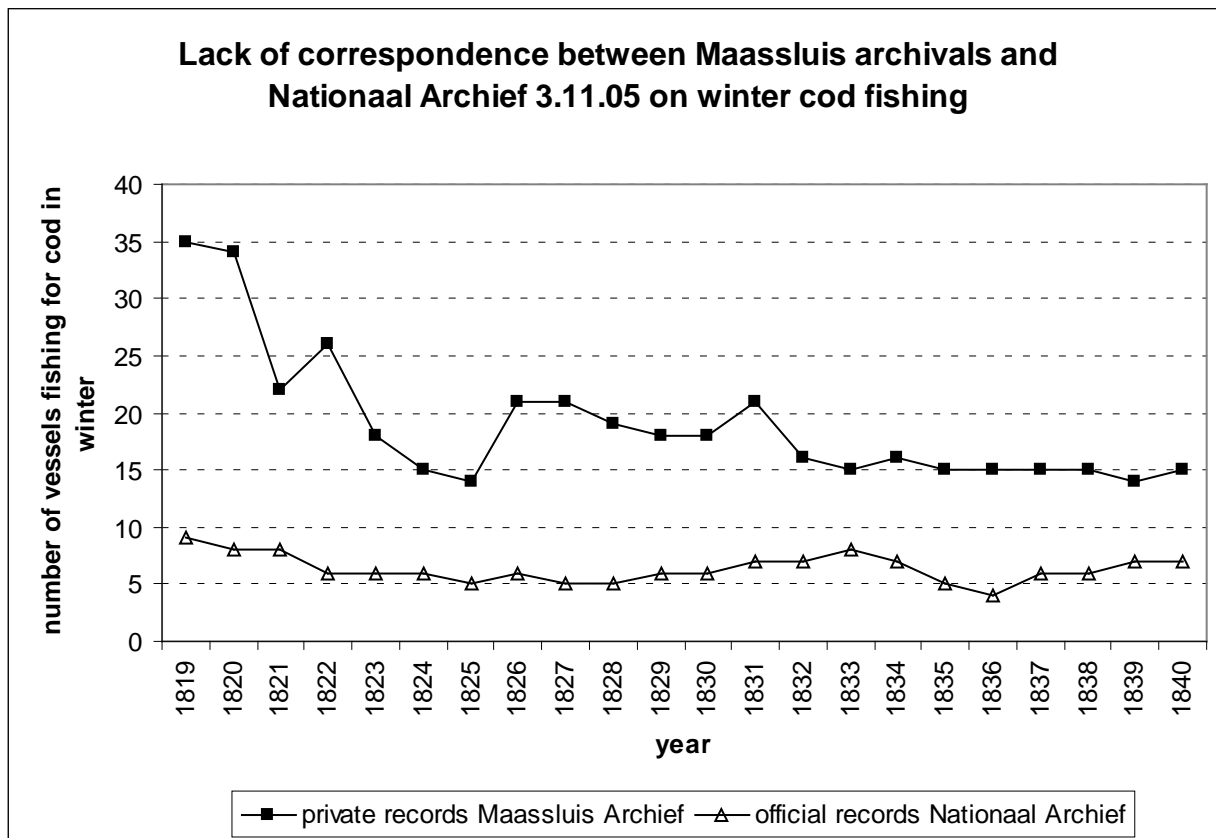
Comparing estimates and comparing with more records on cod fishing

Knowing the amount of cod caught per vessel per season, a precise amount of time spent fishing is needed in order to estimate a CPUE. When looking at the information provided (the number of trips, the dates of first departure and last arrival of the entire season) it is not precise enough. If one vessel made 3 trips to sea for cod and left the first time on November 15th and returned the last time on April 4th, how much time did it spend fishing and how much time sailing to and from the fishing banks, not to forget the time in port

³⁹ Nationaal Archief den Haag, toegang no.3.11.05 inv.1-2 on average number of trips per season

⁴⁰ see Appendix 2 note 40 and Hyldtoft Ole; *Statistik, En introruktion for historikere*; Systime 1999 and Haskins Loren and Jeffrey Kirk; *Understanding Quantitative History*; New Liberal Arts Series, Massachusetts Institute of Technology 1990

landing and loading? The solution applied to Dutch herring fishing was applied to the cod data as well for stock estimates.⁴¹ Is it a fair comparison, cod fishing being a hook and line fishery, needing fresh bait, which was not always available? In addition, in spite of the *premie* being an extra financial opportunity for the ship owners to apply for, they did not all do so, making a cod stock estimate based on the applications inadequate. A comparison of the number of vessels applying for *premie* from Maassluis and the records on vessels fishing for cod kept by bookkeepers in Maassluis shows an interesting discrepancy.



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More than twice as many vessels fished for cod than the ones applying for *premie*. This adds an inaccuracy to the specificity of the catch data in the applications. It is difficult to tell, if this was the case in relation to vessels fishing for cod in other towns because of lack

⁴¹ Brian McKenzie suggested a formula for my cod data. See Appendix 3 note 41

⁴² Nationaal Archief den Haag, toegang no. 3.11.05 inv.1-2 and Stadsarchief Vlaardingen, not registered material, no.490 "Lijsten van alle zodanige Schepen als te visschen zijn uitgevaren van Maas-Sluijs het zij naar de Noordzee, Ysland of ten Haring die vrij van s'Lands Impost opgegeven door Gecommitteerden van de Visscherij te Maas-Sluijs Sedert den Jare 1763" on a comparison between the Maassluis record and the applications from Maassluis ship owners. The graph shows the discrepancy between the number of vessels fishing for cod in winter registered by the ship owners and bookkeepers in Maassluis, and the number of vessels fishing for cod and applying for *premie* in Maassluis as well; the applications being kept at the Nationaal Archief. Evidently, not all vessels fishing for cod applied for *premie*. Bookkeepers in Maassluis might register vessels from elsewhere such as the neighbouring town Vlaardingen, or other Dutch provinces Zeeland and Vlaanderen or the important French port of Dunkerque. To find out, names of the ship owners and the captains may be traced in the Maassluis Lijst and in their eventual homeports.

of data. In Vlaardingen, they did keep an annual record of the vessels fishing for herring, but no record on catch data on herring or cod.⁴³ They provided the names of ship owners, captains and vessels in all the towns engaged in herring fishing at sea in order to keep track of them when sending off the *jagers* that is the vessel going to sea collecting the first catch from the fishers, bringing it back to the market getting a good price. These records provide a good overview of the interrelationship between cod and herring fishing because of the repeat names and vessels in the sources. Records from some of the ship owners in Vlaardingen still exist. They had vessels fishing for cod and herring during the first half of the 1800s and they registered in the annual record on herring vessels. They also applied for *premie* for their cod fishing. Unfortunately, there is not correspondence between all the different records on the companies. It seems they got the names from the companies mixed up.⁴⁴ Such “mistake” in the administration of a practical trade like fishing is an interesting insight into history, but it is also unsure to how many other ship owners made similar mistakes.

The genealogy of ship owners and skippers

The record from Vlaardingen on vessels fishing for herring help create an impression of the network among ship owners and fishers within the fishing community. If a ship owner had three vessels, he probably sent all three off for herring in summer, but only one or two off for cod in winter. When combining the names of the owners and vessels fishing for cod with the corresponding names of owners and vessels fishing for herring, the latter supplied the names of the skippers as well.⁴⁵ Checking the owners and skippers’ genealogy, it shows a picture of the relationship among the persons engaged in fishing in Vlaardingen during the 1800s.⁴⁶ The skippers and ship owners show several examples of cooperation in their means and ways of arranging fishing. They show personal connections by seeking employment/employing with reference to their personal network, marrying within their local fishing network. They show the different family businesses and the introduction of limited companies in cod fishing. The picture created by the records, confirm the story of the (reorganized) company records from Vlaardingen, but of course, there is no guarantee, this was usual practise, as vessels changed name every now and then, and skippers

⁴³ Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar ... van de Maas en 't Noorderkwartier ter Haring-Visscherij uitgevaren; te Vlaardingen

⁴⁴ Nationaal Archief toegang 3.11.05 inv.1-2 and Naamlijste der Boekhouders, Schepen en Stuurlieden and Stadsarchief Vlaardingen, toegang 0017 inv.1-6 Rederij de Hoop See Appendix 4 note 44 and 388 and 398 and 402 on the different sources’ interpretations of the fishing companies

⁴⁵ Nationaal Archief toegang 3.11.05 inv.1-2 and Naamlijste der Boekhouders, Schepen en Stuurlieden

⁴⁶ Stadsarchief Vlaardingen, ISIS and Clausen Nanna Floor, Johansen Hans Chr.; Persondatabaser som kildemateriale for historiske undersøgelser; Historisk Tidsskrift, vol.112, no.1, p.247-259, København 2012 and Johansen Hans Chr.; Historisk demografi. Metoder til studiet af dagliglivet hos ældre tiders befolkning; Fortid og Nutid; vol.26, no.1-2, p.68-85, 1975

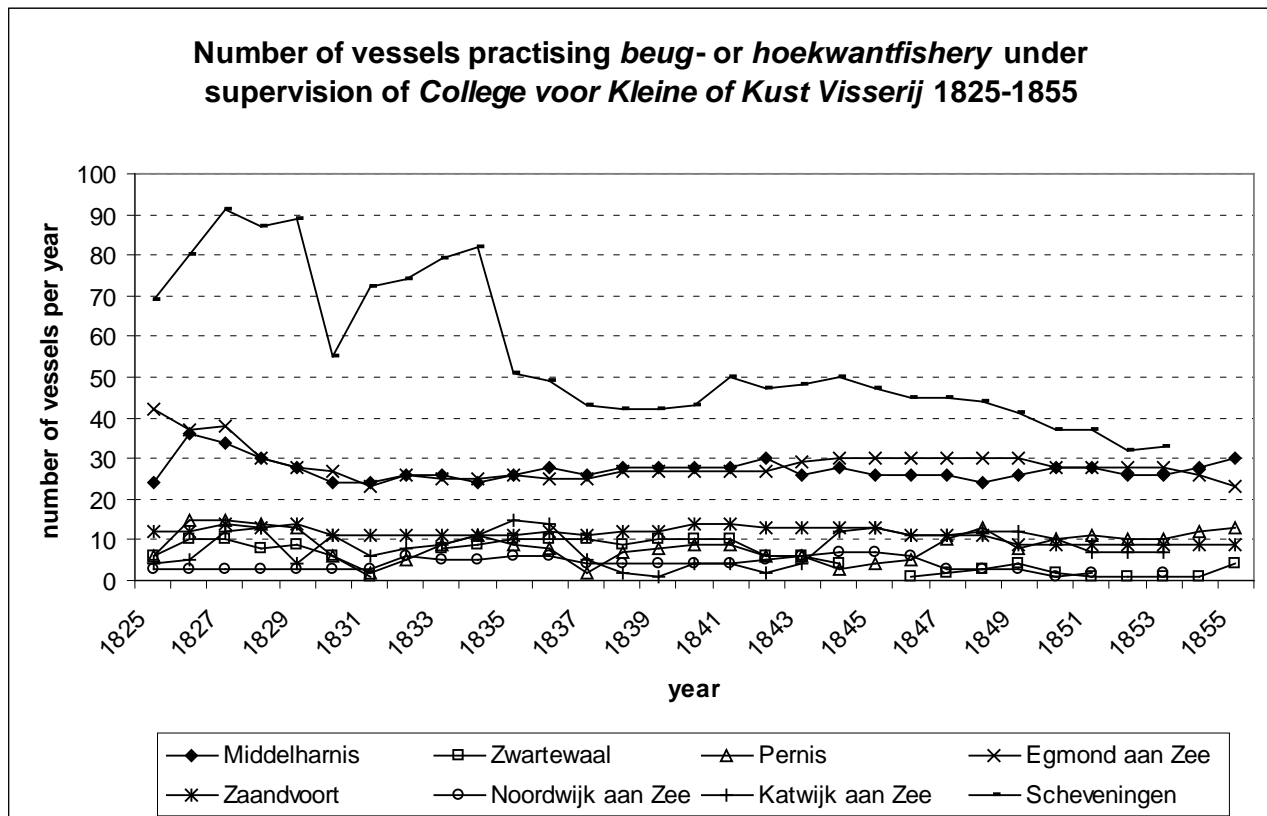
signed on and off each season if they pleased.⁴⁷ The sources on cod fishing emphasize the difference in expertise among fishers fishing for cod and herring; cod fishing being more difficult they thought because of the long lines and the harsh winter conditions, indicating a difference in crew. The difference in vessels used for cod and herring fishing indicate the difference in fishing gear and the time and place the fishers spent fishing in the North Sea. It indicates an impact on the cod stock, while questioning the perception of the vessels and fishing methods hitherto.

The records on financial support for cod fishing along the coast 1825-1853

Correspondence between bookkeepers and ship owners representing the North Sea cod fishing and members of the national administration concerning the conditions and applications for *premie* adds a valuable perspective to the catch data.⁴⁸ From 1819 to 1826, a debate went on between the ship owners from Vlaardingen, Maassluis, Middelharnis, Pernis and Zwartewaal whether they met the criteria for the winter beugvisserij or there was room for divergence. On 15 November 1825, an agreement was settled and fishing with the aim of landing fresh cod only was recognized by the ship owners, fishers and the government as a type of cod fishing valid for half *premie*. Any vessels fishing for fresh fish must apply via the *Kleine Kollegie* representing coastal fishing. The applications held the names of the ship owners, the vessels and the captains, but because the fishers landed fresh cod and not salted cod, they did not report the catch.

⁴⁷ Stadsarchief Vlaardingen, toegang 0017 inv.1-6 Rederij de Hoop see chap. **Dutch fishers during the 1800s**

⁴⁸ Nationaal Archief toegang 3.11.05 inv.3-39



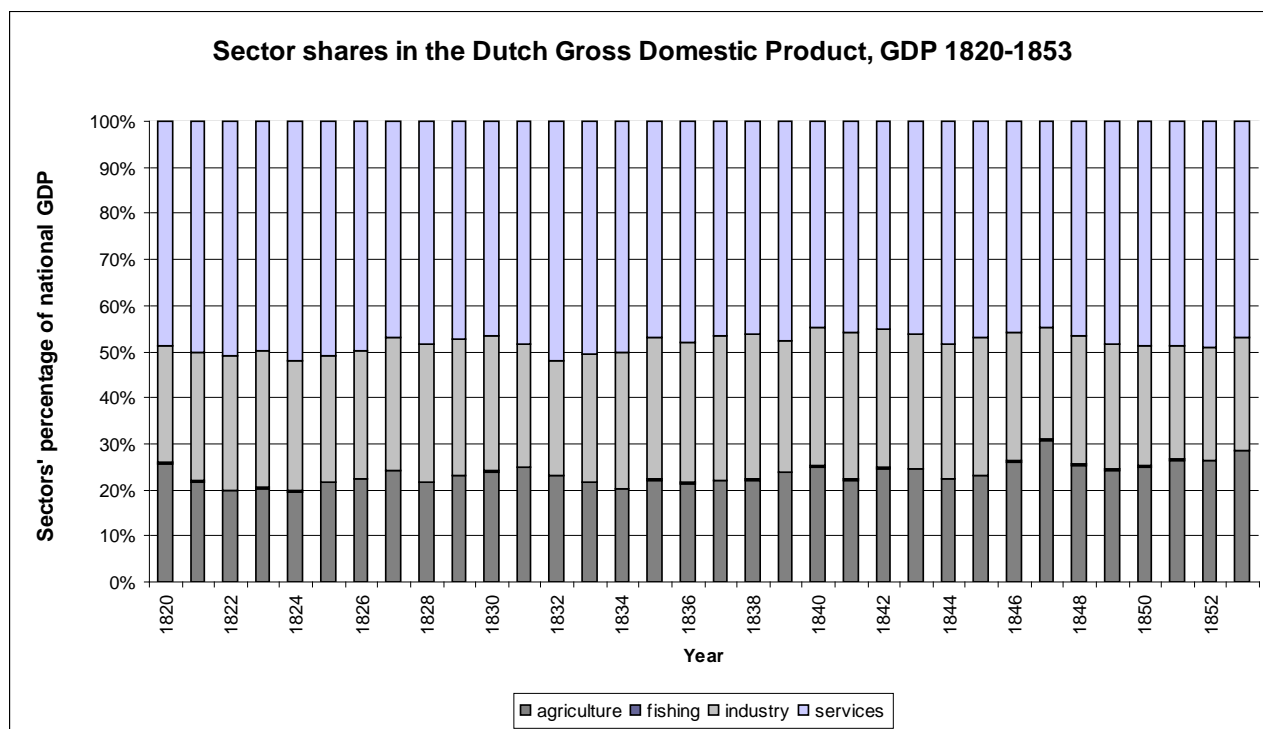
⁴⁹ Vessels from five coastal towns, Egmond-aan-Zee, Zaandvoort, Noordwijk-aan-Zee, Katwijk-aan-Zee and Scheveningen and three towns up the river Maas, Middelharnis, Zwartewaal and Pernis fished for fresh cod during the first half of the 1800s and applied for *premie* from 1825-1855. Minutes from meetings at the *Kleine Kollegie* adds some perspective.⁵⁰ They show the level of organization and social engagement of the members and the issues in coastal fishing treated by the *Kleine Kollegie* over the years. The year reports, *notulen* are concerned with the general societal situation, made by the provinces in the Netherlands and sent to the national administration.⁵¹ The *notulen* held information on the number of vessels practising different kinds of fishing, usually herring or cod fishing in the North Sea, coastal fishing and maybe whaling. They reported unusual storms or cold winters affecting fishing, and any rise or decline in price on catch, but they did not report the actual price nor the catch. The *notulen* give a good overall impression of the fishing business, but they do not provide sufficient information to make stock estimates. In 1820, the ministry of trade and industry initiated a national census of the nature of the industry,

⁴⁹ Nationaal Archief toegang 3.11.04 inv.65-70 on the number of vessels fishing for fresh cod along the coast. *Lastgeld* might have been an indirect source on cod caught, as it was a tax paid according to landings, but records only exist on *lastgeld* paid on herring, see Nationaal Archief, toegang 3.11.04 inv.115

⁵⁰ Nationaal Archief 3.11.04 is a big collection, I have had to restrict my research to the minutes and leave the letters for some other time

⁵¹ Notulen van de Vergadering van hun edel groot achtbaren, de Staten van Holland; beginnende met den 5den julij 1836; Universiteitsbibliotheek Leiden

and in 1843, they arranged for similar vocational census adding a few questions and new types of factories.⁵² The results contain information on trades supplying fishing like rope maker and shipbuilder, but not on fishing itself. Again, the sources give a good impression of the circumstances surrounding cod fishing, but they do not provide valid quantitative data for stock estimates. Today, statisticians reconstruct the Dutch GDP back in time showing different trades' part including fishing.



⁵³ The graph does not tell us whether the fishers and the ship owners made a profit from fishing, but it shows that fishing did not play a crucial role in the national economy in the Netherlands at the time. It did not exceed 2% of the GDP. Fishing may have been of importance at a local level as far as employment was concerned, and nutrition wise maybe on a national scale, but the ship owners claimed the *premie* was necessary for the continuation of cod fishing. The ship owners and fishers supplemented their seasonal fishing with shipping, indicating they did not sustain from fishing alone.⁵⁴

⁵² Brugmans I. J.; Statistieken van de Nederlandse Nijverheid uit de eerste helft der 19e eeuw; 's Gravenhage 1956

⁵³ It is not easy to distinguish fishing from agriculture and industry because it did not exceed 2% of the GDP at any time during this period. It was possible to down load the data. Montacer Ben Cheikh assisted me with the graph on the sector shares. Literature online: Smits Jan-Pieter, Horlings Edwin, Zanden Jan Luiten van; Dutch GNP and its components, 1800-1913; Groningen 2000, chap.4 p.35 on fishing. Smits, Horlings and Zanden use data from Gert Pons' thesis chap.11 covering 1814-1885. Thereafter they use the "Jaarverslagen voor de Visserij-inspectie"

⁵⁴ Buisman H.; De Vlaardingse Koopvaardij in de tweede helft van de negentiende eeuw; MA thesis, Leiden Universiteit, 1982 and Buisman refers to Sweij's publication of rederijen in The Netherlands, the register of vessels passing the Voorne Kanaal and the notarial archives, yet not all vessels were registerest

The liberal reform on Dutch fishing 1854, executed in 1857

The mid-1800s introduced political changes in several European countries, and in the Netherlands, they decided on a constitutional democracy and a liberal government. In 1854, the king alias the minister of the interior appointed a committee to evaluate the current laws on fishing and consider the need for a new law. The committee made a report based on research, interviews and statistics.⁵⁵ The statistics on cod fishing in the North Sea correspond with the data from the applications for support, but the committee refers to a different source, namely the *Nederlandsche Jaarboeken*. Had they looked at the applications for support, they might have obtained information for more than ten years, and seen a larger number of vessels departing for cod per year. The number of vessels declined suddenly in the 1830s due to a rise in *premie* to herring fishing larger than that to cod fishing, influencing the priorities of the ship owners; they were allowed only one *premie* per vessel per year.⁵⁶ Hence, the statistics from the 1854 report provide the number of vessels fishing for cod neither because of profitability or catch rate, but because of occupying the fishers during winter; an all different issue.

Records on Dutch fishing 1857-1911

The consequences of the report on cod fishing was an abolition of any kind of *premie*, and the establishment of one administrative organ, *College voor de Zeevisserijen* covering all branches of fishing, replacing the *Kleine, Groote* and *Ijslandse Kollegien*.⁵⁷ Contrary to the former *Kollegien*, not all members of the *College* came from the fishing business; some were only indirectly if at all connected to fishing, they had an academic career and were selected by the government. The fishers no longer reported their catch in applications; the *College* collected the desired information itself for its annual report to the ministry in charge. According to a later statistical report, the *College* received information on Dutch fishing from *keurmeesters*, annual reports from ship owners, mayors in the fishing towns, directors at the taxation authorities and personally collected information by members of the

⁵⁵ Verslag over de Zeevisserijen uitgebragt door de commissie, benoemd bij koninklijk besluit van den 9den februarij 1854, no.57; 's Gravenhage 1854 p.40-42, bijlage viii-x - The statistics are signed by the president and secretary to the *Gecommitteerden voor de Ijslandsche- en kabeljauw-visscherij in de provincie Zuidholland*, (3.11.05) H. Kikkert and P Kikkert

⁵⁶ In 1805, the prohibition against multiple "*premien*" per vessels came into force, see ... "Archief, Groote Visserij tot 1823, nr.12, fol.224 vo.-225, 7/5-1805" in Thomas Simon; *Onze Ijslandsvaarders in de 17de en 18de Eeuw, bijdrage tot de geschiedenis van de nederlandse handel en visserij*; proefschrift Rijksuniversiteit te Utrecht, 1935, p.228 and Zappey W.M.; *Het Fonds voor de Nationale Nijverheid 1821-1846*; *Exercities in ons verleden, Twaalf opstellen over de economische en sociale geschiedenis van Nederland en koloniën 1800-1950*; p.27-42, Assen 1981

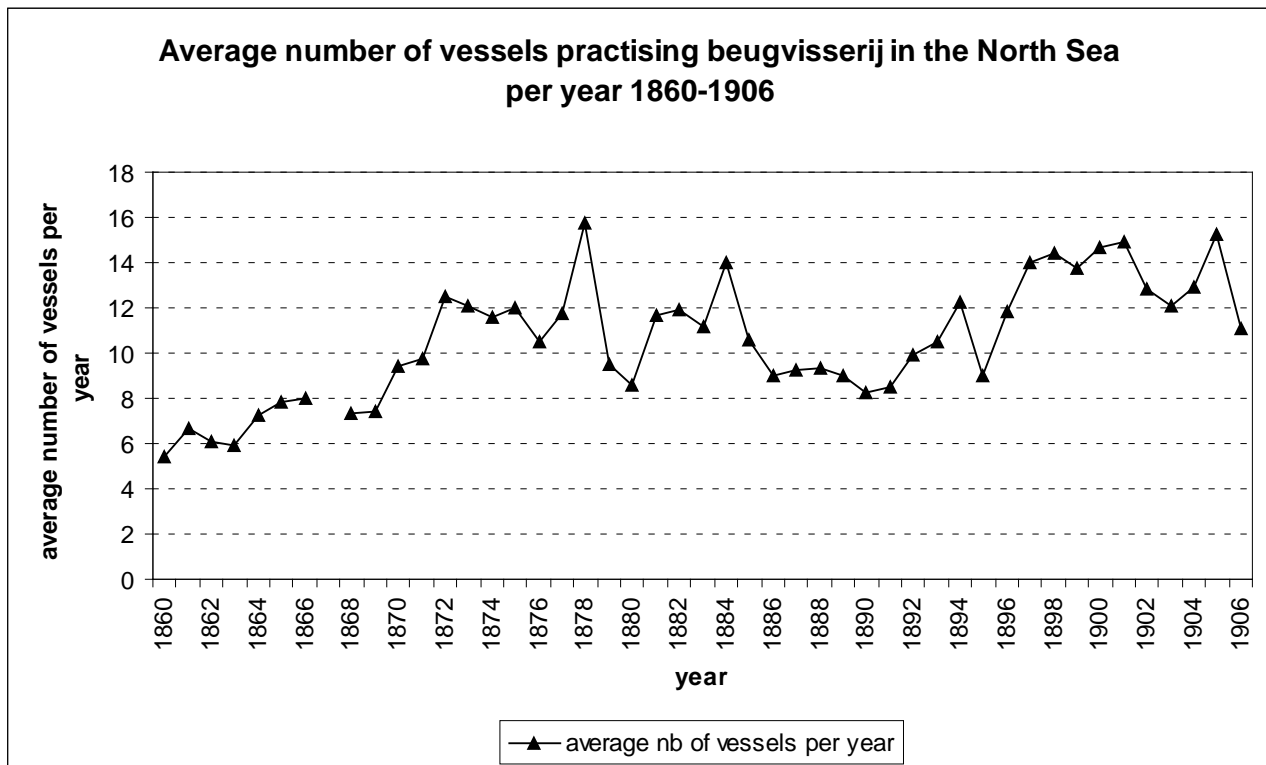
⁵⁷ *College voor de Zeevisserijen*; *Verslagen van der Staat der Nederlandsche Zeevisserijen*; 1857-1911 *Groote Kollegie* was the administrative organ concerning herring fishing at sea since 1578

College.⁵⁸ The *Verslag* consisted of two parts: one on the work of the *College* and the general issues in fishing business and one specifically on each branch of fishing including catch records on cod fishing at sea and near the coast. Over the years, information was added. It focused on the export of Dutch fish, and added information on the surrounding countries' fishing business, reports from world exhibitions with relation to fishing and results from zoological stations, the Dutch in particular. From the first *Verslag*, data on cod caught in the North Sea consisted of the name of the town, the month within which the catch was landed, the number of vessels fishing for cod each month and the total catch of the month being the tons of cod, lips, jaws and *kibbelen* and the number of fresh cod caught at sea.⁵⁹ The catch also included ling and haddock, because they were considered cod-like fish, and *botvisch* and *kolvisch*.⁶⁰ There was information on the maximum and minimum price on the products and the export markets. It is hard to tell if the same vessels went fishing every month or only some months. It leaves some uncertainty to the quality of the data.

⁵⁸ Stuart C. A. Verrijn dir.; *Bijdragen tot de Statistiek van Nederland, nieuwe volreeks*; Geschiedenis van de Statistiek in het Koninkrijk der Nederlanden, Centraal Bureau voor de Statistiek, 1902, vol.XIV, p.150 and *Keurmeester* is a Dutch description of the man in charge of or responsible for the *keur* of the fish that is the cleaning and salting of the fish. Bly Frans; *Verklarende Vakwoordenlijst van de Zee-Visscherij*; Leuven 1931

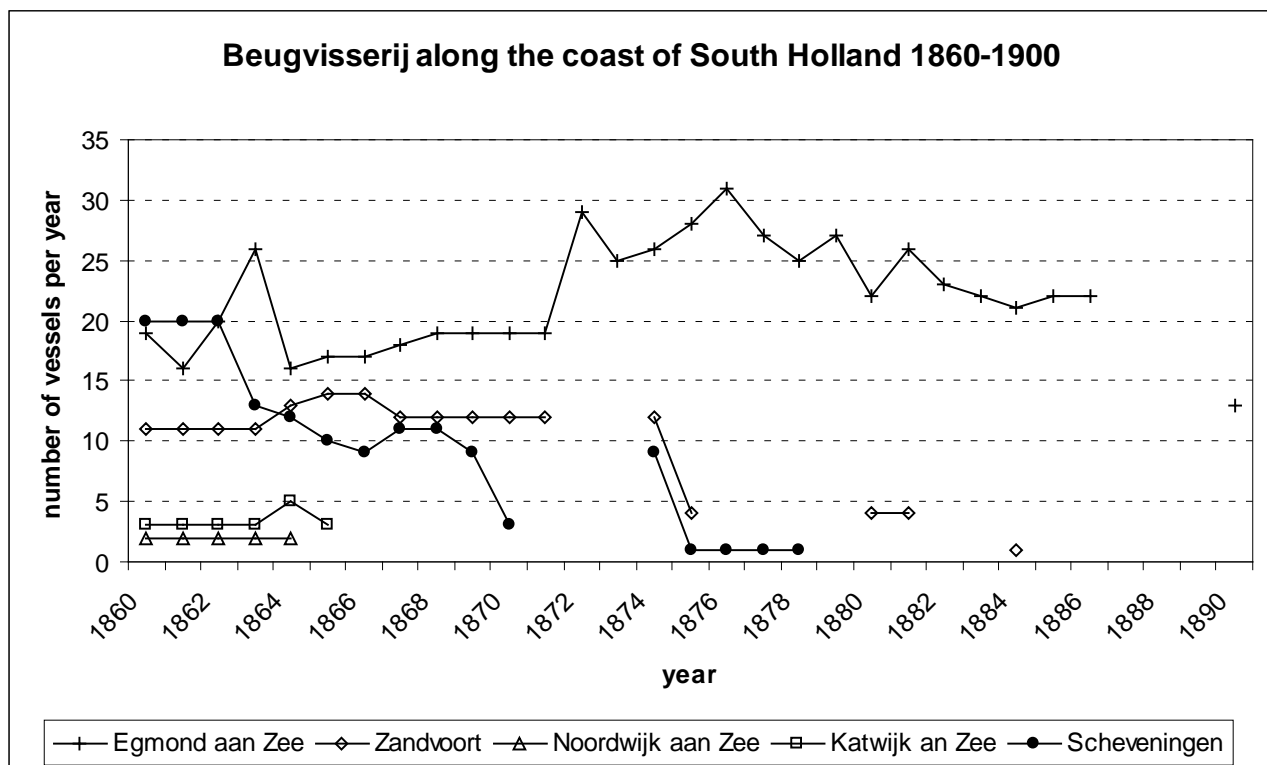
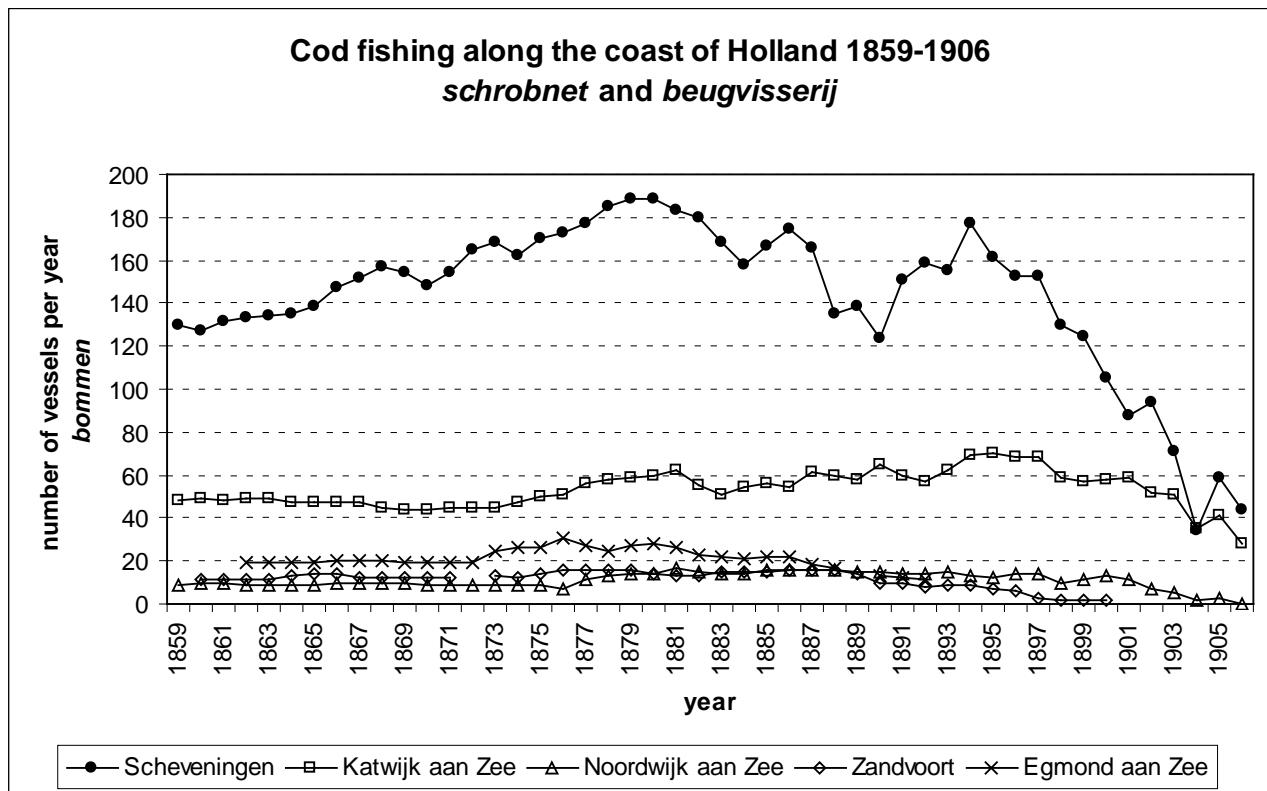
⁵⁹ *Kibbelen* is a Dutch description of the cut-off from the cod when cleaned and salted in barrels. This cut-off was itself salted and put in barrels, 350 pieces to a (herring)ton on average. Bly Frans; *Verklarende Vakwoordenlijst*;

⁶⁰ In winter, when ice covered the water, the fishers cut holes in the ice and caught *botvish*. In Spring, after spawning season, the fishers caught *kolvish* at sea. Bly Frans; *Verklarende Vakwoordenlijst*;



⁶¹ This graph shows the cod fishing using long line, *beugvisserij*, in the North Sea 1860-1906. Coastal fishing included herring, flatfish and cod. The *Verslag* had information on the number of vessels fishing for cod near the coast and their revenue from doing so. In the 1860-70s, the coastal fishers still used long line, but slowly they switched to *schrobnet*. This change in fishing gear changed fishing. Unfortunately, no catch data exist from the coastal cod fishing vessels. There were figures on how many cod were sold at a market, but not by whom, and only by the end of the century was the end of *vrouwenvis*. The fishers began exporting fresh cod; amount in pounds (weight) per destination per year, and the *College* paid attention to these foreign markets as well when the *Verslag* mentioned the export markets of cod and the amount of cod exported every year.

⁶¹ *College voor de Zee-visserijen, Verslagen van de staat der Nederlandse Zeevisserijen 1860-1906* on the average number of vessels fishing in the North Sea (1857) 1860-1906



⁶² The reason why the first graph declines is partly that the *College* distinguished between

⁶² *College voor de Zeevisserijen, Verslagen van de staat der Nederlandse Zeevisserijen 1860-1906* and Nationaal Archief den Haag toegang no.3.11.04 inv.65-70 on the number of vessels fishing for cod along the coast 1859-1906

coastal fishing using *bom* vessels and coastal fishing using *loggers* or *schuiten*. The *boms* were flat-bottomed vessels drawn up on the beach when returning, while the others had a keel and must return to port. The first graph illustrates fishing using bom vessels. The change in gear and the difference in sources from the first to the second half of the 1800s make comparison of data difficult.⁶³

The reasons for keeping records on cod fishing

The statisticians at the time sought uniformity and conformity. They recommended that the government harmonised its official statistics. One member of the *College* was also involved in the attempts to reform the national statistical activities. Antoine Beaujon, professor in economics at the Amsterdam University, member of the *College* by *Koninklijk besluit* 17/5 1889 no.22. Beaujon engaged in the development of statistics at international conferences and organizations, but Dutch politicians generally did not think that funding to compile statistics would pay off and therefore rejected most initiatives.⁶⁴ The extent and standard of the *Verslagen* on Dutch fishing might have been due to few people's passion rather than an official request. Statistics were concerned about issues related to the establishment of the national states in Europe like demographic issues. The centralistic need of compiling and analysing statistics collided with the liberal ideas of individual freedom. Only when politics had become more social-liberal by the end of the century did the politicians accept statistical institutions in the Netherlands, including the *Visserijonderzoek*. Even biological research reflected the national and financial interests at the time. In the Netherlands, research at the *Visserijonderzoek* focused on herring and flatfish, while internationally interest was on the fluctuations in the cod stocks and overcoming these by i.e. fish hatching. Scientists in the Netherlands and other countries around the North Sea did try to answer the fishers's concern on the overall decline in catch rates by the end of the 1800s. Not only must the scientists collect data they also had to figure out at the time if fishing had an impact on the spawning-stock biomass, and if there were any characteristics of different genetic species of cod in the North Sea. Simultaneously, the scientists realized that simply analysing catch data did not suffice, and the general statistical methods available did not suffice either, as they were appropriate for the social sciences, and the anthropological dilemmas, not the natural sciences and their biological questions with relation to the cod stock in the North Sea. Their concerns did not prevent them from working though. By the turn of the century, they joined scientists from

⁶³ Different sources claim that local newspapers in Vlaardingen reported the fish landed locally, but I have not been able to confirm this. See i.e. Ligthart A.G.; *De Vlaardingers en hun haringvisserij*; Zaltbommel 1966, p.18. The newspapers *Weekblad van Maassluis* and *Vlaardingsche Courant* published on a weekly basis from 1869.

⁶⁴ Maarseveen Jacques G S J van, Klep Paul M.M., Stamhuis Ida H. ed.; *The Statistical Mind in Modern Society. The Netherlands 1850-1940*; aksant 2008, vol.1 chap.1,3,4

countries around the North Sea coordinating their research on the biological work in groups: one on migration, one on overfishing and one on the Baltic, in the newly established International Council for the Exploration of the Seas, ICES. Correspondingly, the *Verslag* added a third part, which soon became the biggest containing the results of the natural scientific work on fishing.⁶⁵ By 1902, the Dutch definition of statistics was:

*„bij de samenstelling van de thans verschijnende “Geschiedenis van de statistiek in het Koninkrijk der Nederlanden” het standpunt is ingenomen, dat onder statistiek moet verstaan worden methodische boekhouden van voor wetenschap, administratie of praktijk belangrijke verschijnselen. Op het verzamelen der gegevens volgt dan wetenschappelijke bewerking der gegevens en ten slotte uitbeelding der aldus verkregen uitkomsten in tekstueelen vorm of door grafische voorstellingen. Cijfers zijn daarbij niet onmisbaar, doch zullen vaak gebruikt worden omdat ze kort en scherp een resultaat weergeven.”*⁶⁶

The biological data

An understanding of the development of Dutch cod fishing should be founded on an understanding of the life of the cod in the North Sea. In 1876, a zoological station, established in Nieuwediep in Holland in the Netherlands, asked the government for money to study the variability of the catches. It was the initiative of one man, P. P. C. Hoek, much inspired by the English researchers Buckland and Walpole, whom the Dutch government did not agree with.⁶⁷ Nevertheless, the government recognized the need for marine research and granted Mr. Hoek financial support. Interestingly, his zoological station paid attention to the Zuiderzee and the herring and flatfish, rather than to the North Sea and the cod stock. Apart from not attracting the interest of the Dutch scientist, Dutch cod fishing had two overall characteristics, at the beginning of the 1800s. One was that the fishers fishing for cod lived and registered their vessels in certain towns, fishing being the prime occupation. Another was that, in connection with cod fishing, these towns were ranked or categorized according to when and where the fishers went fishing.⁶⁸ It seems the fishers

⁶⁵ Smith Tim; *Scaling Fisheries*; chap.2-4

⁶⁶ Stuart C. A. Verrijn; *Bijdragen tot de Statistiek van Nederland*; preface

⁶⁷ *Verslag van den staat der Nederlandsche Zeevisscherijen over 1880*; p.49-53 and Groot S.J. de; *Een Eeuw Visserijonderzoek in Nederland 1888-1988*; RIVO IJmuiden, 1988, p.1-22 This book tells a short story of the erection of the Visserijonderzoek, but when mentioning the first temporary zoological stations from 1876 onwards it does not mention one at Nieuwediep. Instead, it says the government supported a permanent scientific advisory institution in 1889 by sponsoring the location at Nieuwediep, established in 1890. On the antipathy towards Buckland and Walpole see *Verslag van den Staat der Nederlandsche Zeevisscherijen over 1885*; p.41-48,65

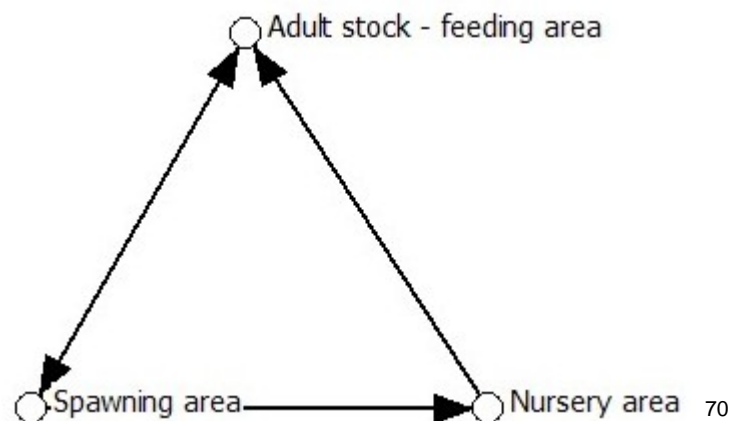
⁶⁸ These characteristics originated long before 1800, see i.e. Kranenburg H.A.H.; *Het Visserijbedrijf van de Zijdenaars in de 15e en 16e Eeuw*; *Tijdschrift voor Geschiedenis*, 1949, vol.62, p.321-333

sought to comply with getting a good catch while avoiding overfishing. Seen from the cod's perspective the fishers's distinction between when and where is crucial.

The cod (*Gadus morhua*)

The cod is a demersal fish, living near the bottom of the sea at a depth ranging from 600-60 meters. It is a carnivorous fish, meaning it eats other fish, even of its own species. It also means the cod is among the fish at the top of the food chain, only few other fish like sharks and tuna or mammals like seals may eat old cod; or human beings eat cod. Today, the average length of cod caught is 110 cm and the average weight is 15 kg. The oldest is 20 years old, but the average age is much less, probably 4-6 years. The cod has an otolith, an ear stone, responding to low frequency sound waves. The otolith is made of chalk, and as the cod grows old, new layers of chalk are added, enabling the scientist to date the cod. The cod is known for its liver, which is used and manufactured as pharmaceutical product oil, and for its eggs used for food along with the fish meat. In spite of its importance to the fish, the air bladder is of no value commercially. The air bladder helps the cod ease the pressure if swimming up or down in the water. This happens occasionally, such as when the male and female cod copulate by swimming close together upwards in the water releasing milk and eggs, or when moving to and from spawning grounds. It also happens when the cod migrates according to seasonal fluctuations in temperature and salinity of the water. The cod prefers a temperature of 2-10°C and a salinity of 35‰. The cod in the North Sea is a boreal fish living in the combination of the warm, salty Gulf stream, the fresh water from the European rivers and the brackish water from the Baltic. Until recently, the North Sea cod was thought of as one species compared to for example the Canadian cod or the Iceland cod. Now, it is recognized when some cod in the North Sea prefer certain spawning grounds near the Scottish coast while others prefer spawning grounds in the English Channel where the Gulf Stream meets the coastal water from the rivers, there is a genetically based reason to it.⁶⁹ They may mix and enjoy each other's company throughout the North Sea, but as they spawn, they separate and emphasize the fact that they are of distinct origin. Cod spawn over several days from January to April each year. They release thousands of eggs in batches floating in the water, and depending on the water temperature, the eggs hatch to become larvae within 2-4 weeks. The larvae live off plankton and fleas and grow quickly. After about 4 months, they are 5 cm long and hide from predators towards the bottom of the coastal waters. Young cod, juveniles, remain in the nursery area in the coastal waters and eat shellfish and small fish.

⁶⁹ Hutchinson William F, Carvalho Gary R, Rogers Stuart I; Marked genetic structuring in localised spawning populations of cod *Gadus morhua* in the North Sea and adjoining waters, as revealed by microsatellites; *Marine Ecology Progress Series*, vol.223, p.251-260, 2001



They may mature, and reach fecundity at the age of two, yet reaching fecundity does not necessarily mean the cod will spawn and reproduce, but the ability to do so augments with age. For a cod stock to maintain itself, it must secure a spawning-stock biomass, SSB equivalent to or larger than its natural mortality rate. To the cod, this implies having the opportunity to join the adult stock and swim to the spawning ground in certain areas in the North Sea where its particular genetic species spawns. It also implies that their eggs and larvae survive the crucial and vulnerable time growing up in the nursery area, and it implies leaving a sustainable amount of juveniles to grow old, joining the adult stock, providing the best quality spawners and future cod. Scientists discuss if, how and why this happens.⁷¹

Estimating the cod stock

Though P. P. C. Hoek did not pay attention to the cod, academic and commercial interests changed with time, and today the scientist does pay attention to the cod in the North Sea. Because the scientist works on a source that is only accessible at sea, his work depends on the means and ways of obtaining samples and information on the cod stock. One way of doing this is from fishing, asking the fishers to report their catch, the time they spent fishing, the type of gear they used, possibly where they caught the cod. This allows the scientist to calculate the catch per unit of effort, CPUE. When the scientist knows how much the fishers caught per time unit, he may assume the size of the population of that year. In case he calculates the CPUE of several years, he may estimate the surplus yield

⁷⁰ This is a simplified copy of Harden Jones' triangle of migration from Fish migration; St. Martin's Press, Edward Arnold Publishers Ltd. London 1968 presented in Cushing D.H.; Climate and Fisheries; Academic Press 1982 p.47 showing the adult fish' migration back and forth between the feeding area and the spawning area every year, while the eggs and larvae move from the spawning area to the nursery area on their own, joining the adults when ready.

⁷¹ Jennings Simon, Kaiser Michel J., Reynolds John D.; Marine Fisheries Ecology; Blackwell Publishing, 2001 and Muus Bent J., Nielsen Jørgen G., Dahlstrøm Preben, Nystrøm Bente O.; Havfisk og Fiskeri; Gads Forlag, 1997 and Myers Ransom A., Barrowman Nicholas J.; Is fish recruitment related to spawner abundance?; Fishery Bulletin; 1996, vol. 94, p.707-724

of the cod stock, the biomass and thereby future catch rates, or the maximum sustainable yield, MSY to the fishers. This is an “equilibrium method”, because it sees a correspondence between the catch of the number of vessels fishing and the size of the fish stock. It believes that the catch rates are always equal to the cod stock, hence the equilibrium. In spite of this risky overestimate, the principle of the CPUE is used in other ways of estimating the cod stock. One is, simply not believing the catch equals the biomass. This is the “non-equilibrium method”. The virtual population analysis, VPA is another method for stock estimates. When the scientist uses the VPA, he considers the catch data of one year equivalent to only part of the cod stock that year. It is equivalent to the minimum, or the so-called fishing mortality. The scientist adds the natural mortality to the fishing mortality to find out the total mortality of the year. He allows the total mortality to be equal to a minimum estimate of the cod alive in the previous year part of the total cod stock that year. Then, he makes backwards estimates on fish stocks. The scientist adjusts his backwards estimates each year when new information arrives from the fishers, and his most recent estimates become history that he may verify by his new backwards estimates. A more advanced statistical addition to the VPA, the catch-at-age method, takes into account the age of the cod when caught and the extent to which there is a spawner-recruit relationship and if the recruitment deviates. It is concerned if the cod caught had the ability to reproduce and thereby left some juveniles to further the stock, or the catch reduced the stock with no ability to maintain itself. This method is interested in the recruited cod of the year rather than the dead cod of the year. It is closer to incorporating the life history of the cod and knowing the size of the cod stock. The advanced statistical addition demands more data than the fishers provide.

Problems when estimating fish stocks

Another way of obtaining samples and information on the cod stock is for the scientist himself to catch the fish and make the notes on when and where it was caught. This is a scientific trawl survey, at which he measures the cod, finds out what it eats, if or when it spawns, how many do so at what age, and much more. The trawl provides the scientist with a different basis for calculations on the cod stock than does the fishers's data. Some scientists use both kinds of data in their research on the cod stock. The extirpation of fish stocks like the Peruvian anchovy or the Canadian cod during the 1900s forced the scientist to double check the validity of his data and his calculations. The anchovy was caught in the Pacific Ocean and brought a big fishing industry of importance to the national economy in Peru. The trawlers had a good catch, so according to the scientist's calculations the stock was doing well. This was not the case, though. Fish are density-dependent, and tend to obtain fecundity at an earlier age if density declines usually when fishing increases. This

shows in the catch records as fishers land more juveniles. Furthermore, fish like the Peruvian anchovy tend to stay in shoals, easily fitted into a trawl. Thereby the catch data remained high, while the stock declined until extirpation. The scientist acknowledged the weak point of his CPUE calculation relying on catch data only. The Canadian cod stock collapsed in the 1990s after several centuries of famous cod fishing.⁷² It came as a surprise, while the Canadians also managed their cod fishing according to common criteria, and the fishers landed cod, confident the stock stayed at a steady level.⁷³ Later, scientists found a discrepancy between the commercial records used for VPA calculations and stock estimates, and their own records from scientific trawls.⁷⁴ The Canadians overestimated the cod stock while they underestimated the fishing and this caused the tragedy. Luckily, the anchovy stock recovered slowly after a conversion of the fishing banks into no-take-zones, NTZ. The same no-take-zone conversion happened to the Canadian fishing banks, but the cod stock has not yet recovered. Now, there is a better understanding of the life of the cod. There are also different interpretations of how cod fishing developed.

Historical perceptions of fish stocks and estimates of historical fish stocks

One interpretation manifested during the 1800s, when the world exhibitions were established as a successive means of promoting and exchanging expertise and technology. During an exhibition on fishery in London, the English member of the Royal Commission, Thomas Huxley gave a speech on new fishing technology in which he expressed his opinion on the status of the fish stock. He said:

“that the cod fishery, the herring fishery, the pilchard fishery, the mackerel fishery, and probably all the great sea-fisheries, are inexhaustible; that is to say that nothing we do seriously affects the number of fish. And any attempt to regulate these fisheries seems consequently ... to be useless.”⁷⁵

Already at the time, concerns existed in countries bordering the North Sea regarding the decline of the fish stock in general. Scientists were stimulated by the expression that the fish stock was inexhaustible and nothing would affect it and initiated research. Hitherto, the biologist counted on the information provided by the fishers when landing their catch. Now, the scientist started collecting his own data i.e. on board marine vessels surveying fishing

⁷² Innis Harold A.; The Cod Fisheries, The History of an International Economy; University of Toronto Press 1940

⁷³ Myers Ransom A.; Hutchings Jeffrey A., Barrowman H.J.; Hypotheses for the decline of cod in the North Atlantic; Marine Ecology Progress Series, 1996, vol.138, p.293-308

⁷⁴ Myers Ransom A., Hutchinson Jeffrey A., Barrowman Nicholas J.; Why do fish stocks collapse? The example of cod in Atlantic Canada; Ecological Applications, 1997, vol.7,1, p.91-106

⁷⁵ Smith Tim; Scaling Fisheries; p.53 In his reference, Tim Smith writes that “The scientific and technical papers presented at the 1883 Fisheries Exhibition were published in several volumes under the general title “The fisheries Exhibition London 1883”.”

vessels. Some sources for studying Dutch cod fishing in the 1800s consist of fishers's reports, combining catch data with comments on fishing. It is possible to make estimates on the cod stock at the time, using the catch data and CPUE or VPA calculations, but the lack of information from the cod, like age, fecundity or predator-prey, leaves the estimates with uncertainty. Source criticism of the catch data on Dutch cod fishing in the 1800s indicates pitfalls similar to the ones detected in relation to the Canadian cod fishing.⁷⁶ Canadian fishers went around the rules set by the Canadian fisheries management by discarding juveniles smaller than the limit for landing, and foreigners circumvent the rules on mesh size when fishing outside the 200 mile-zone of Canadian jurisdiction. Fishers knew the tricks to get a good catch and a good profit. Usually, biomass estimates are made out of fear that fishing mortality may exceed the fish stock's ability to reproduce, and no one questions the fishers's need to maximize profit. Some historical theses on Dutch fishing in the 1800s confirm this point of view, yet only few of them consider cod fishing as such.⁷⁷

Modern perceptions of fish stocks and estimates of current fish stocks

Another recent interpretation argues that different environmental changes influence the egg, larvae, juvenile and even the adult cod and thereby affect the SSB. Changes occur in the North Sea because of the North Atlantic Oscillation, NAO. The NAO is the difference in pressure in the northern hemisphere between the north and the south or, more specifically the hPa measured between Iceland and the Azores. The NAO affects the westerly winds across the North Atlantic, and depending on the strength of the NAO the winds may either bring cool summers and mild winters to Europe, or they bring heat waves in summer and freezing cold winters. A positive NAO causes the former with low pressure at Iceland and high pressure at the Azores. A negative NAO causes the latter with high pressure at Iceland and low pressure at the Azores. The changes in the pressure and wind may also affect water temperature, salinity, food or predators. A scientist working on these aspects not only collects data on cod during various stages of its life from fishing and trawl surveys. He also collects information caused by the NAO on the environment at the particular time for example meteorological or oceanographical information. Cod and other fish and plankton migrate along currents and tidal streams in the sea, influenced by wind and

⁷⁶ Myers Ransom A., Hutchinson Jeffrey A., Barrowman Nicholas J.; Why do fish stocks collapse? The example of cod in Atlantic Canada; Ecological Applications, 1997, vol.7,1, p.91-106

⁷⁷ An exception to the rule is Smit M H; De ontwikkeling van de nederlandse haringvisserij, een beeld van de aan- en uitvoer, groote, indeling en herkomst van de vloot en de onderlinge verhouding van de vissersplaatsen dit alles onder invloed van veranderingen op vistechnisch politiek, biologisch, economisch en geografisch gebied; doctoraalscriptie, Rijksuniversiet Groningen 1986. Smit, being the son of a fisher, describes the cod, its habitat, the fishing methods and fishinggrounds, and the overfishing of the cod stock realized by 1960, contradicting himself at the end by defending a regulated fishery after having praised the liberal politics of the 1850s throughout.

temperature throughout the year, cod preferring certain water temperature at sea. Therefore, the scientist matches data on temperature with cod data to test any relationship, and he looks at the effects of wind and currents on the food and predators of larvae. Today, the scientist places data storage tags, DST on the live fish tracing its migration patterns, while collecting data on sea temperature and depth. The DST are removed and analysed once fishers or scientists catch the fish. The information obtained from the DST allows for various analysis of the life and death of cod. Some analyses argue there is a decline in the age of fecundity of cod, caused by change in temperature. Others argue there is a decline in length of the cod at fecundity caused by change in temperature. Yet others focus on the depth to which cod swim and an eventual consequence to recruitment. Most scientists agree that the effect of the negative NAO in winter corresponds well with the preferences of the cod stock in the North Sea.⁷⁸

The shifting baseline and the history of Dutch cod fishing

The difference between the environmental interpretation and the interpretations of stock assessment is the importance attached to long-term-changes in catch in correspondence with the environmental changes. Special attention was drawn to this part of marine research by a postscript in a thematic issue of a scientific paper.⁷⁹ The author thinks changes in the environment happen so fast that new generations of scientists are not aware of conditions prior to their entry into the profession, or the baseline from which they make estimates is very different to former generations' baseline for similar estimates. This affects the overall impression of evolution, hence the "shifting baseline syndrome". The author suggests:

"Developing frameworks for incorporation of earlier knowledge ... into the present models of fisheries scientists would not only have the effect of adding history to a discipline that has suffered from lack of historical reflection, but also of bringing into biodiversity debates an extremely specious group of vertebrates: the fishes... Framework that maximizes the use of fisheries history would help us to understand and to overcome – in part at least – the shifting baseline syndrome, and hence to evaluate the true social and ecological costs of fisheries."

This long-term perspective is interesting from a historical point of view, and such ideas initiated the original proposal for this thesis - was there any historical evidence to the

⁷⁸ Palsson Olafur K., Thorsteinsson Vilhjalmur; Migration patterns, ambient temperature, and growth of Icelandic cod (Gadus morhua): evidence from storage tag data; Canadian Journal of Fisheries and Aquatic Sciences; 2003, vol.60,11, p.1409-1422 and Brander Keith; Effects of environmental variability on growth and recruitment in cod (Gadus morhua) using a comparative approach; Oceanologica Acta, 2000, vol.23, 4, p.485-496 and Rindorf Anna; Torsk og klima i Nordsøen; DTU Aqua, Fisk & Hav; 2009, vol.62, p.24-31

⁷⁹ Pauly Daniel; Anecdotes and the shifting baseline syndrome of fisheries; Postscript, Trends in Ecology & Environment, 1995, vol.10, nb.10, p.430

decline in the cod stock in the North Sea - and fellow projects. However, the environmental interpretation does not include economic, commercial and legal factors in its perception of long-term-changes.⁸⁰ An editorial comment in a different paper adds that if baselines are shifting as indicated, many stock assessment models make calculations on a false starting point. This being the case in most areas, the editor suggests the scientists accept it and recognize it as part of their work. Fisheries science does not have formal approaches dealing with historical sources, and he thinks it unlikely there is an effective mechanism for utilizing qualitative data in a useful way overcoming the shifting baseline syndrome.⁸¹

The methodology

Environmental history and Dutch fishing history

Environmental history has a solution to this problem. Environmental history has emerged within the broad field of history including the study of marine environmental history. The overall idea embracing environmental history is placing the environment as the subject in research. The formation of the History of Marine Animal Population, HMAP branch of the international Census of Marine Life organisation, sets up a database for registering all fish back in history. Thereby, a quantitative methodology is presented for future marine environmental history, supplying the scientists with historical data for stock estimates. The HMAP board of historians presents guidelines for the use of historical sources in environmental history, categorizing them according to their statistical applicability: the statistical period from today until roughly 1900, the proto-statistical period from 1850-1900 and the historical era prior to 1850. CPUE calculations based on data from Canadian cod fishing during the 1800s is an example on how to work with historical data in marine environmental history. It shows a decline in the cod stock already in the mid-1800s, but from a different baseline than today, and the sources provide information on the weight and the number of cod caught by whom, when and where; supplemented by the history of the life of the fishers placing the stock estimate in a social context.⁸² The combination with

⁸⁰ MacKenzie Brian R., Alheit Jürgen, Conley Daniel J., Holm Poul, Kinze Carl Christian; Ecological hypotheses for a historical reconstruction of upper trophic level biomass in the Baltic Sea and Skagerrak; Canadian Journal of Fisheries and Aquatic Sciences, 2002, vol.59, p.173-190 and Eero Margit, Köster Friedrich W., MacKenzie Brian R.; Reconstructing historical stock development of Atlantic cod (*Gadus morhua*) in the eastern Baltic Sea before the beginning of intensive exploitation; Canadian Journal of Fisheries and Aquatic Sciences, 2008, vol.65, p.2728-2741

⁸¹ Sheppard Charles; The shifting Baseline Syndrome; Editorial, Marine Pollution Bulletin, 1995, vol.30, no.12, p.776-767

⁸² Holm Poul, Starkey David J., Smith Tim D.; Introduction; The Exploited Seas: New Directions for Marine Environmental History; IMEHA, p.xiii-xix, St. John's New Foundland 2001 and Rosenberg Andrew A., Bolster Jeffrey W., Alexander Karen E., Leavenworth William B, Cooper Andrew B., McKenzie Matthew G.; The history of ocean resources: modelling cod biomass using historical record; Frontiers in Ecology, 2005, vol.3,

a contextual history is crucial, as a basic problem may be natural scientists using scientific methodology on historical sources, and the marine environmental historians' acceptance.⁸³ Poulsen's thesis on Dutch herring fishery provided an example of environmental history within the HMAP framework, by investigating the impact of environmental changes on the fishers's catch of herring from 1600-1860. It shows the importance of combining qualitative and quantitative data, and eventual precautions when scientific modelling instead of historical source criticism provides the basis for the conclusion.⁸⁴ The British researcher D.H.Cushing commented on scientists who calculated the degree of fishing mortality and exploitation, while disagreeing with investigations on climatic effects on recruitment, reminding them they all work towards securing the SSB. He aimed at introducing a new historical framework overcoming the shifting baseline syndrome and his idea contributed to the original proposal for this thesis.⁸⁵

The questions and the arguments

The questions posed to me were first, was there any historical evidence to the decline in the cod stock in the North Sea? Second, when did the exploitation begin? Hoping a long-term answer might help solve today's problem of accurately estimating SSB and thereby managing cod fishing more efficiently: I shall present the historical sources on Dutch cod fishing in the North Sea and discuss their validity as such and as a historical key to answering the natural scientific question. A great deal of the sources on Dutch cod fishing during the 1800s contains catch data and corresponding comments. When adding the figures to a database and reading the comments it became clear that biological modelling missed valuable aspects of information from the adherent context. The quantitative HMAP approach sought as many data as possible to obtain an idea of the cod stock back in time, but the sources on Dutch cod fishing also provided an opportunity for a qualitative study including perspectives of each fishing town, maybe even of particular fishing vessels and ship owners, useful when overcoming the shifting baseline syndrome.⁸⁶ Therefore, I have chosen to replace the HMAP model by the wide embracing institutional analysis

no.2, p.84-90 and Bolster Jeffrey W.; Opportunities in Marine Environmental History; Environmental History, 2010, vol.11, July, p.567-597 and Sörlin Sverker, Warde Paul; The problem of the problem of environmental history: a re-reading of the field; Environmental History, 2007, vol.12, January, p.107-130

⁸³ Magurran Anne E., Baillie Stephen R., Buckland Stephen T., Dick Jan McP., Elston David A., Scott Marian E., Smith Rognvald I., Somerfield Paul J., Watt Allan D.; Long-term datasets in biodiversity research and monitoring: assessing change in ecological communities through time; Trends in Ecology and Evolution; 2010, vol.25, no.10, p.574-582 and Sittert Lance van; the other seven tenths; Anniversary Forum: What is Next for Environmental History?; Environmental History, 2005, vol.10, January, p.106-109

⁸⁴ Poulsen Bo; Historical exploitation of North Sea herring stocks – an environmental history of the Dutch herring fisheries c. 1600-1860; Ph.D.-dissertation, Centre for Maritime and Regional Studies, Department of History and Civilization, University of Southern Denmark, submitted 30 September 2005

⁸⁵ inspired by work done by the British marine researcher Cushing D.H.; Climate and Fisheries; London 1982, p.71,95,321,326

⁸⁶ Smith Carol A.; At kombinere det kvantitative og kvalitative; Den Ny Verden; 1999, vol.32, no.3, p.11-30

development framework, IAD. My argument for doing so is linked with the empirical material, exemplified by what happened as a consequence of the French revolution in 1789, when the war and continental blockade against the English from 1810 and Napoleon's occupation of the Dutch Republic from 1795 to 1813 marked the definitive end to what is known as the Golden Period. In Dutch fishing history, this became an intermezzo putting cod fishing in the North Sea on the map. Hitherto, the Dutch fished for herring like the French fished for cod. Maybe this was why the French allowed the Dutch to fish for cod, but not for herring during their occupation? It is certain that to the Dutch this was a reverse. The ship owners sent barrels of salted herring to the emperor, and they wrote letters trying to convince him of the importance of herring fishing, but with no success. They even met Napoleon himself. Finally, the fishers figured out how to circumvent the French and catch herring along with cod. The trick was that the French permitted the cod fishers to bring nets for catching bait for the *beugvisserij*, so they might catch herring for bait, bringing back the "bait" along with the cod, but they only managed at a small scale. Instead, cod fishing became the arbiter of herring fishing.⁸⁷ How could this happen?

The Institutional Analysis and Development Framework and the arguments

First, the majority of cod fishers also practised herring fishery, but at different times of the year, so they themselves lost or gained according to the degrees of cooperation. They collectively chose to take the risk when deliberately (mis)interpreting the French rules on cod fishing. Second, cod fishers already fished according to their own coordinated strategies, they did not need to set up a particular organization to deal with the issue, they just adjusted their habitual doings for all fishers to sustain. The dilemma when fishing exemplified in the intermezzo revealing the difference between and consequence of governed and self-governing fishing. The dilemma shows in research in fisheries management. Elinor Ostrom provides empirically based research on users of common-pool resources, among others fishers deciding when, where, what and how to fish. She uses game theory to investigate eventual strategies of the users, whether it makes a difference if the rules of the game are set by external institutions or by the users, whether the users can communicate during the game, how they make sure all users stick to the rules, and if they sanction anybody free riding.⁸⁸ Elinor Ostrom works within the

⁸⁷ Vermaas J.C.; *De Haringvisserij van 1795 tot 1813*; Vlaardingen 1922; finished and published post-mortem by Sigal M.C.Jr. p.115-171 and Romburg C.P.P. van; *Visserij in oorlogstijd. De Nederlandsche Haringvisserij tijdens de Bataafsche Republiek, 1795-1806*; NETwerk Tijdschrift van de Vereniging Vrienden van het Visserijmuseum, Jaargang 5, no.1, p.7-20, 1994

⁸⁸ Ostrom; *Rules, Games and Common-Pool Resources*; Michigan Press

institutional analysis development framework mentioned, which she defines as many situations consisting of the same set of elements, namely:

“An action arena composed of an action situation involving participants in positions, who must decide among diverse actions in light of the information they possess about how actions are linked to potential outcomes and the costs and benefits assigned to actions and outcomes [and]

Actors, the participants in action situations, who have preferences, information-processing capabilities, selection criteria, and resources”⁸⁹

Different kinds of rules, attributes from the physical world, and from the community affect this action arena and the actors, and create patterns of interactions and an outcome. It allows for multiple levels of analysis, which Ostrom has systematized according to the institutional impact on the rules involved.⁹⁰

Constitutional Choice Level	Collective Choice Level	Operational Level		Constitutional Choice Level	Collective Choice Level	Operational Level
Action situation	Action situation	Action situation		King and State Council	1st and 2nd Chambre in National Parliament, Provincial Council, Governor and <i>College</i>	Local Council and <i>Kollegien</i>
Constitutions	Laws	Community			Constitution and Laws	Community
	Rules in Use	Rules in Use			Rules in Use	Norms and traditions
		Physical				Network
Monitoting and Sanctioning	Monitoting and Sanctioning	Outcomes			Monitoting and Sanctioning	<i>Keurmesteren, ontvanger, boekhouder and teller</i>

In the table, the left half shows Ostroms theory on multiple levels of analysis and the right half shows the analysis applied to the Dutch society seen from the fishing community's point of view in the 1800s. The theory is about who makes the rules in society, who executes them and who follows them, and where in society, at which institutional level these people work. It is also about the possibility for people to change position between the institutions and thereby to change their role as someone making rules, monitoring rules or working according to rules; why this is important, and why it makes a difference. Applying

⁸⁹ Ostrom; Rules, Games and Common-Pool Resources; chap.2, p.28-29 and Schlager Edella, Ostrom Elinor; Property-Rights and Natural Resources: A Conceptual Analysis; Land Economics, 1992, vol.68, no.3, p.249-262

⁹⁰ Ostrom; Rules, Games and Common-Pool Resources; p.47

the theory to Dutch society is not easy in one table as everything changed in the 1850s. The table shows the change as the ship owners' *Kollegie* was at the local, operational level from 1818-1854, whereas its successor the *College* worked at the collective choice level from 1857-1911, indicating the end of the ship owners influence on their occupation.

Dutch fishing history

Working with IAD, presenting the history of Dutch cod fishery in the 1800s, I show how the institutional structure of the Netherlands corresponds to Elinor Ostrom's multiple levels of analysis, and how changes in the Dutch cod fishers's different rules affected their actions; including fishing, having an impact on their profit from fishing as well as on the cod stock. The IAD framework facilitates the use of different theories when analysing. Using game theory, Ostrom acknowledges that not all actions stem from rational and perfectly informed decisions, rather some decisions arise from an incomplete and insecure basis. In such cases, she applies game theory with bounded rationality.⁹¹

*"A ..significant taxonomy of theories of rational behaviour.. differentiates them by the assumptions they make about the "givens" – the given goals and the given conditions. Particularly important is the distinction between those theories that locate all the conditions and constraints in the environment, outside the skin of the rational actor, and those theories that postulate important constraints arising from the limitations of the actor himself as an information processor. Theories that incorporate constraints information-processing capacities of the actor may be called theories of bounded rationality... Rationality in the classical theory of the firm.. the given objective is to maximize profits.."*⁹²

This is different to previous analysis of Dutch fishing history. Broadly speaking, the Dutch know two traditional fishing histories: the Golden Period when herring fishery did well, and the successive period when fishing business fell behind technological progress elsewhere. Historical research discusses why the Dutch lost the lead and why they were so slow in later catching up again. The general perception is that on the one hand, first war, then the rule of King Willem I impeded progress during the first half of the nineteenth century and on the other hand, the negative attitude of the ship owners towards steam vessels and trawl hindered progress during the second half of the century.⁹³ Historians are amazingly

⁹¹ Ostrom Elinor; Background on the Institutional Analysis and Development Framework; Policy Studies Journal; 2011, vol.39, no.1, p.7-27

⁹² Simon Herbert A.; Theories of bounded rationality; Models of Bounded Rationality, vol.2, part 2, chap.8.2, 1997

⁹³ Bruijn J.R.ed.; Maritieme geschiedenis der Nederlanden; De Boer Maritiem Bussum, vol.1-4, 1976-1978 preface vol.1, p.8-10 It is a sum up of the maritime business, and a handbook for a wider audience, having an international group of authors from museums, archives and universities. They divide the history chronologically into four volumes, dealing with the same topics within maritime history, but at different times. It is part of the manifestation of maritime history in the Netherlands in the 1960-70s see Broeze F.J.A., Bruijn J.R., Gaastra F.S.; Maritieme geschiedenis der Nederlanden, Achttiende eeuw en eerste helft negentiende

consistent in coming to this conclusion. Fishing history is considered to be more part of maritime history than part of economic history in spite of the fact that most books and theses analysing Dutch fishing history during the 1800s do so from an economic point of view. This being the case, it is understandable the environmental historians feel like trying new interpretations. Three theses on Dutch fishing written by Schouten, Smit and Wekke apply a neo-classical point of view making maximizing profits the goal of fishing, discussing different means of increasing profits.⁹⁴ They use fishing techniques and gear as a common variable like the local fishers's manpower, and they discuss production factors in relation to the impact of external factors like regulations on fishing, the local port or the organizations bringing fish to port or selling fish. Schouten, Smit and Wekke are disappointed that Dutch fishing business did not profit from fishing, but part of the reason is the historians not knowing the sources on cod fishing during the first half of the 1800s, nor questioning the existence of the external factors. All variables are one way or the other considered a hindrance to the advancement in and profitability of fishing. When liberalisation in politics and legal changes came about in the middle of the century so did the "freedom" of fishing and the profits. Two theses by Hoek and Veen chose a new approach paying attention to working conditions and hardship connected with seasonal work in fishing business, and the appearance of trade unions in fishing business.⁹⁵ They mention the growing industrial sector in the Netherlands in the second half of the century as a competitor to seasonal fishing by employing fishers all year round, but they do not mention any fishers or ship owners' connection to shipping or any of their sidelines. Still, Hoek thinks ship owners worried more about their investment in fishing vessels than about their labour causing a lack of solidarity among fishers and ship owners, initiating the

eeuw van ca 1680 tot 1850-1870; De Boer Maritiem Bussum, 1977, vol.3, p.318-334 and Baetens R., Bosscher M., Reuchlin H.; Maritieme geschiedenis der Nederlanden, Tweede helft negentiende eeuw en twintigste eeuw van 1850-1870 tot ca 1970; De boer Maritiem Bussum, 1978, vol.4, p.272-301 and Beaujon A.; Overzicht der Geschiedenis van de Nederlandsche Zeevisscherijen; Uitgegeven met toestemming van het International Fisheries Exhibition Committee, London 1883; Leiden, 1885 Beaujon answered the question "...on the history of Dutch Sea-fisheries, their progress, decline and revival, especially in connection with the legislation on fisheries in earlier and later times" and Bruijn Jaap R.; A Quayside View of the Dutch Fisheries; NETwerk, Fish, War and Politics 1300-2003, International Conference; Jaarboek 15, p.10-17, in cooperation with NAFHA Studia Atlantica, vol.7, 2004

⁹⁴ Wekke Dean van der; De ondergang van de (beug)visserij van Middelharnis, Een poging tot verklaring van de ondergang van de (beug)visserij in Middelharnis in de periode 1839-1923; doctoraalscriptie, Erasmusuniversiteit Rotterdam, 1989 and Smit M H; De ontwikkeling van de nederlandse haringvisserij; chap.1-2 and Schouten Anton; De nederlandse groote trawlvisscherij; proefschrift, Rijksuniversiteit Utrecht 1942

⁹⁵ Hoek G.; Economische geschiedenis van het Rijnmondgebied, de haring- en beugvisserij; Economische en sociale geschiedenis, Doctoraal werkcollege, Erasmus Universiteit Rotterdam, Faculteit der Economische Wetenschappen, Rotterdam juni 1975 and Veen D J; De Nederlandse haringvisserij 1850-1910, een laatste periode van bloei; doctoraalscriptie, Utrecht 1979

decline in fishing business (following the profit from exploiting the fish stock by 1900).⁹⁶ Solidarity mattered in general, yet Veen and Verseput look at the controversies between fishing towns when solidarity was absent, showing how one town's loss became the other town's gain.⁹⁷

Dutch family business history

There is a difference in analysis and conclusion depending on either approaching the line of fishing business and its profitability or looking at a particular fishing company and its means of working as a route to understanding the development in fishing. When studying the fishing company Hopstaken shows its administrative structure, its financial arguments for rigging vessels for fishing and its trade links. The company is the focal point, with names and figures personifying the data. The testimonials from the ship owners and fishers and the local community reveal much engagement in fishing and different priorities to just profit maximizing.⁹⁸ Hopstaken is concerned about the influence of politics, new techniques and economics on fishing, seen from the company's point of view; interestingly it does not bring about complaints of slow progress in fishing. This company was one among a handful of limited companies established during the first half of the 1800s in the local fishing towns in the Netherlands. Their history is interesting as part of Dutch fishing history and of Dutch business history by announcing the discussion on family business versus limited companies in relation to fishing. It is also interesting by replacing maximization as goal of production and new institutionalism with a more satisficing constitutionalism.⁹⁹ The latter is not far from Elinor Ostrom's use of game theory and bounded rationality within the IAD framework. What is different in her cases, and those I present, is the continuity in business and thereby in understanding history. Here, the process is important, and when studying a family business this means the accumulation and utilization of knowledge and expertise within the business, across generations.¹⁰⁰ Biographies of ship owners or fishers, fishing history written with a social perspective and

⁹⁶ Hoek G.; Economische geschiedenis van het Rijnmondgebied, de haring- en beugvisserij; p.19-21 and Pons Dirk; De bakens verzet, een analyse van de Hollandse pekelharingvisserij met kielschepen in de periode 1814-1885; proefschrift, Universiteit Utrecht december 1996 and Magnusson Lars; Between micro and macro – what economic history can learn from modern economics; Scandinavian Economic History Review; vol.51, no.2, p.14-22, 2003 and Knudsen Christian; Økonomisk metodologi, Virksomhedsteori & Industriøkonomi; chap.1-2,6-7, Jurist- og Økonomforbundets Forlag 1997

⁹⁷ Verseput J. Dr.; Middelharnis een eilandgemeente; Rotterdam 1953 and Veen D J; De Nederlandse haringvisserij 1850-1910;

⁹⁸ Hopstaken J.M.W.; De Katwijksche Maatschappij tot Uitoefening van Kust- en Steurharing-Visscherij 1838-1858, De Hollandse kustvisserij in de eerste helft van de negentiende eeuw op lokaal- en bedrijfsniveau beschouwd; Doctoraalscriptie, Subfaculteit Geschiedenis Rijksuniversiteit te Leiden, 1984

⁹⁹ Knudsen Christian; Økonomisk metodologi; chap.4,8

¹⁰⁰ Knudsen Christian; Økonomisk metodologi; chap.9-10 and Ostrom Elinor; Collective Action and the Evolution of Social Norms; The Journal of Economic Perspectives; vol.14, no.3, p.137-158, 2000

qualitative comments in archival material on fishing are of importance.¹⁰¹ The continuity in the fishing business relied on a coherent ecosystem. This does not seem to have caught the attention of the historians working on the line of fishing business, showing that there is a difference in the conception of cod; it is understood as either a commodity or a common-pool resource, most historians treating it as a commodity.

Multiple researchers + one resource = multiple answers

The current debate on CPR including fishing and fish stocks was initiated in a series of articles. The first of these was Milner B. Schaefer's report on behalf of a commission investigating a correlation between fish stocks, fishing and fisheries management.¹⁰²

*"A population of oceanic fish under exploitation by a fishery may be influenced by a great number of elements in the complex ecological system of which it forms part. Of these however, only one, predation by man, is capable of being controlled or modified to any significant degree by man's actions. ... Management of a fishery has as its purpose the modification or limitation of the activities of the fishers in order to realize a change in the fish population, or the catch, or both, which in some manner is preferable to that which would obtain if the fishers were allowed to operate without these modifications or limitations."*¹⁰³

Schaefer presents calculations on the effect of fishing on the fish stock showing how a diminishing fish stock may provide high catch rates before collapsing, presuming the maximum equilibrium, that is the optimal catch from the fish stock, was bigger prior to the data available in 1954. Therefore, Schaefer ends the article by saying that

*"In order to apply the theory developed here... it will be necessary to compile statistics of catch, abundance and intensity of fishing over a considerable series of years, beginning as early in the history of the fishery as possible."*¹⁰⁴

A further important article was written by an economist, H Scott Gordon, who believes research on fishing lacks the economic perspective, as only biologists study the field.¹⁰⁵ Gordon thinks

¹⁰¹ See for example Voort Jan P. van de; Het wel en wee van een Vlaardingse koopman-reder tijdens de Belgische Opstand; NETwerk, Jaarboek Visserijmuseum Vlaardingen 1997, vol.8, p.38-74 and Struijs Maatthijs A.; ABRAHAM VAN DER LINDEN Leven en werk van een belangrijke achttiende-eeuwse Vlaardinger; Hoogendijkreeks 1, Vereniging Vrienden van het Visserijmuseum, 1995 and Brugmans I. J. Dr.; Paardenkracht en Mensenmacht, Sociaal-Economische Geschiedenis van Nederland 1795-1940; 's Gravenhage 1961 and Brugmans I. J. Dr.; De arbeidende klasse in Nederland in de 19e eeuw 1813-1870; Utrecht Antwerpen (1925) 1970 and Vermaas J. C.; Geschiedenis van Scheveningen; vol.2, 's Gravenhage 1926 published post-mortem

¹⁰² Schaefer Milner B.; Some Aspects of the Dynamics of Populations Important to the Management of the Commercial Marine Fisheries; Inter-American Tropical Tuna Commission, Bulletin, Vol.1, no.2, p.27-56, 1954 reprinted in Cushing D.H. ed.; Key Papers on Fish Populations; Oxford 1983 p.111-151

¹⁰³ Schaefer; Some Aspects of the Dynamics of Populations; p.27

¹⁰⁴ Schaefer; Some Aspects of the Dynamics of Populations; p.54

*“...that most of the problems associated with the words “conservation” or “depletion” or “overexploitation” in the fishery are, in reality, manifestations of the fact that the natural resources of the sea yield no economic rent.”*¹⁰⁶

The article rests on an analysis of the fishing of demersal fish including cod, and the reason is a perception of their habitual preferences of particular fishing banks contrary to more migratory pelagic fish like herring. This characteristic of cod supports Gordon's economic analysis when defining the fishers's optimal use of a fishing bank as one maximizing their net income economically, or as the total costs and the total benefits as a function of the fishing effort. He explains how the average productivity may vary from one fishing ground to another, showing how the fishers always aim for the one providing the best catch and thereby the best profit - for a while; then they obtain equal rent on all grounds. Gordon thinks the answer to this is the law of diminishing returns. He also thinks that

“...since average cost is the same for all grounds and the average productivity of all grounds is also brought to equality by the free and competitive nature of fishing, this means that the intramarginal grounds also yield no rent. It is entirely possible that some grounds would be exploited at a level of negative marginal productivity. What happens is that the rent, which the intramarginal grounds are capable of yielding, is dissipated through misallocation of fishing effort.

*This is why fishers are not wealthy, despite the fact that the fishery resources of the sea are the richest and most indestructible available to man. By and large, the only fisher who becomes rich is one who makes a lucky catch or one who participates in a fishery that is put under a form of social control that turns the open resource into property rights.”*¹⁰⁷

Schaefer and Gordon wrote their articles at the same time. They knew the same sources, but they presented two different points of view on fishing and the fish stock. They both considered regulation and management of the CPR a necessity as fishing from open sources threatened the resources. Schaefer preferred an external body governing the fishers, while Gordon suggested a mutual agreement among the fishers on their use of the CPR. The last designated article is probably the most often quoted. Garret Hardin published it in 1968, yet an English lecturer at Oxford University first published the key part of the article on the tragedy of the commons in 1833.¹⁰⁸ The topic of Hardin's article is the population problem (on earth), and Hardin's answer to this is that it presupposes a change in morality; technical solutions do not suffice. He then provides several theoretical

¹⁰⁵ Gordon H. Scott; *The Economic Theory of a Common-Property Ressource: The Fishery*; Journal of Political Economy, vol.62, no.2, p.124-142, 1954

¹⁰⁶ Gordon; *The Economic Theory of a Common-Property Ressource*; p.124 Gordon mentions that “fisheries management” is the new word at the time replacing “conservation” or “depletion”

¹⁰⁷ Gordon; *The Economic Theory of a Common-Property Ressource*; p.131-132

¹⁰⁸ Hardin Garrett; *The Tragedy of the Commons*; Science; 1968, vol.162, no.3859, p.1243-1248

examples on why morality should change, among them Malthus, von Neumann and Morgenstern, Bentham and Adam Smith. Hardin wrote about the latter saying

*"...he contributed to a dominant tendency of thought that has ever since interfered with positive action based on rational analysis, namely, the tendency to assume that decisions reached individually will in fact, be the best decisions for an entire society. If this assumption is correct it justifies the continuance of our present policy of laissez-faire in reproduction... If the assumption is not correct, we need to re-examine our individual freedom to see which ones are defensible."*¹⁰⁹

Hardin then quotes the lecture from 1833 on how open access to a field made each farmer in a village let one then two then three of his cattle graze in the field in order to raise his own profit and in the end, he and his colleagues exploited the field. Hardin thinks, the farmers were stuck then in their exploitation of the commons because of their desire for profit; they were not capable of deciding otherwise. He provides similar up-to date examples, indicating some regulation may be desirable.¹¹⁰ Because of the attention paid to the 1968-article over the years, Hardin responded in a more recent article saying that *"Its message is... still true today. Individualism is cherished because it produces freedom, but the gift is conditional: The more the population exceeds the carrying capacity of the environment, the more freedoms must be given up."*¹¹¹

Interaction between fisheries, fish population and coastal communities

Today, natural scientists or economists use different methods from those used by Schaefer and Gordon to explain the exploitation of CPR around the world, therefore it is interesting that these articles are often referred to in the debate on CPR. They express the private, the common and the free property right and the natural, the political, economical, and the social sciences. The articles are not much referred to in historical research; there is not much research on Dutch fishing history applying the IAD framework and no research on Dutch cod fishing in the 1800s yet. It is my impression, today there is a distinct separation between fishery and fisheries management, which was not necessarily the case back in time, and which needs to be understood to consider fishing history and interactions between the fisheries, fish populations and the coastal communities properly. As the IAD is a framework, I supply the analysis of fishing business with a business theory.¹¹² It is a theory on how to manage your business well in order to be effective, make

¹⁰⁹ Hardin; *The Tragedy of the Commons*; p.1244

¹¹⁰ Hardin; *The Tragedy of the Commons*; p.1248

¹¹¹ Hardin Garrett; *Extensions of "The Tragedy of the Commons"*; Science, 1998, vol.280, no.5364, p.682-683

¹¹² Penrose Edith; *The Theory of the Growth of the Firm*; fourth edition, Oxford University Press 2009 (1959)

the most of your resources and grow; but it is not a theory on how to maximize profit. This is possible because it is a theory about growth as well as about knowledge.

“For anything and everything new to even be conceived, perceived, let alone implemented, one needs prior knowledge, including the very capacity to obtain knowledge, i.e. to learn.

There exists a variety of institutions that help achieve this: families, schools, norms, customs and traditions, human interaction in society at large... For Penrose it is the firm, which help create knowledge, indeed firms are seen by her as better at doing so than markets.”¹¹³

When the fishers fished for cod they applied knowledge and experience gained from previous generations' cod fishery. While Ostroms IAD framework helps analyse fishing history in general, Penrose' theory helps considering the actions taken within the fishing business as such. She thinks

“..a firm is more than an administrative unit; it is also a collection of productive resources the disposal of which between different uses and over time is determined by administrative decision... the size of the firm is best gauged by some measure of the productive resources it employs. The physical resources of a firm consist of tangible things – there are also human resources available in a firm – strictly speaking, it is never resources that are ‘inputs’ in the production proces, but only the services that the resources can render.

The services yielded by resources are a function of the way in which they are used...resources consist of a bundle of potential services...it is largely in this distinction that we find the source of the uniqueness of each individual firm.”¹¹⁴

Penrose thinks particularly of two kinds of services within the firm, the ones managing the firm in the everyday business, and the entrepreneurial ones creating new opportunities enabling the firm to grow. The theory is concerned with how the resources apply these services within the firm to acquire new resources and to grow. Penrose' theory recognizes that some businesses may not aim at expanding or at profit maximizing; they may have reasons for simply remaining in business. Instead of rejecting such businesses, Penrose discuss their options and decisions. Data from particular ship owners in the 1800s show how they had different options and made different decisions over time according to circumstances. The skippers on the fishing vessels for example were important resources to the ship owner and his business. The service the skipper supplied was important to the success and eventual growth of the business, and here lie the interactions between fisheries, fish populations and the coastal communities.

Composition of the study

¹¹³ Penrose Edith; The Theory of the Growth of the Firm; p.XXXIII

¹¹⁴ Penrose Edith; The Theory of the Growth of the Firm; p.21-22

Fish is a common resource, desired by many, but not always accorded the same respect. This Introduction shows many professions working with fishing and fishing history, each having different approaches. Historians including Dutch (cod) fishing in their work come to different conclusions depending on their approach, their analysis, varying from maximizing profit by trawling, to the social network and consequences of changing fishing gear, to liberalisation and exploitation of fish stocks to financial support, co-operation and business structure. They may use the same sources but because they apply different theories when analysing they conclude differently. They each have a different understanding of the subject. Lack of understanding the historical background might be a problem when approaching fishing business, but the opposite might also be the case. In the Introduction was a brief description of the nature of cod and cod fishing to ease understanding of fishing history. Knowing the time of the year cod spawns helps understand the consequences of regulating time or space of fishing. Like knowing the role of the business structure, helps understand the degree of co-operation or profit maximizing. Focusing on maximizing catch rates and profit or focusing on coherent ecosystems and human systems have long been opponents when trying to explain the development in cod fishing. I prefer making a contextual, comparative analysis of Dutch cod fishing.¹¹⁵ First, I describe the development of Dutch cod fishing at sea and near the coast during the 1800s. I analyse the importance of the institutional framework in this development to how the fishing fleet changed and its probable effect on the cod stock in the North Sea.¹¹⁶ Second, I look at the ship owners, and the fishers and their co-operation within the fishing communities and their different choices in relation to cod fishing, examining the importance of family business in Dutch cod fishing showing a case study from Vlaardingen.¹¹⁷ Third, I apply Elinor Ostrom's institutional analysis and development framework and game theory to the history of Dutch cod fishing. I look at the results from the perspective of Edith Penrose' theory of the growth of the firm, and I discuss the interesting aspect that they did the opposite in cod fishing in the 1800s as they do today.¹¹⁸ Finally, I collect the answers to the questions I addressed and I conclude.

¹¹⁵ Ragin Charles C.; Constructing Social Research; Pine Forge Press 1994, chap.5

¹¹⁶ See **Dutch cod fishing in the 1800s**

¹¹⁷ See **Dutch cod fishers in the 1800s**

¹¹⁸ See **Modern theory and old (re)sources?**

Dutch cod fishing in the 1800s

In 1999, the annual ICES science conference took place in Stockholm, commemorating the centenary of the organisation with special lectures on its history. Jakob Jakobsson commenced his lecture by saying that

*“The fear of overfishing was one of the reasons for establishing ICES. As time has passed, other problems have come and gone but the problem of overfishing has persisted within the organization for one hundred years and shows little sign of disappearing.”*¹¹⁹

In the late 1800s, an English scientist, Cunningham collected English statistics on fishing, calculating the catch per vessel, concluding, like Huxley at the international conference in London, that there was no decline in the fish stock in the North Sea. However, because of the subsequent debate on Cunningham's methodology, a biologist, Garstang began working on English *and* Scottish statistics on fishing and came up with different results. Garstang distinguished between seasonal changes in catch records, and paid attention to geographical locations of fishing, and types of vessel and gear used when providing data for the statistics. He also invented a standard measure to vessels and gear, while noticing different vessels using different fishing efforts when reporting similar catch data. When estimating the size of the fish stock, Garstang not only needed the catch data, but also the amount of effort used when obtaining the catch. The English *smack* sailing vessel became the standard measurement when comparing the efficiency of vessels, equalizing one steam trawler with four *smacks*. Now, analysing the statistics, Garstang concluded a possible exhaustion of the fish stock in the North Sea, because of a decline in catch rates and a rise in fishing effort from the 1880s.¹²⁰ Thereby, the scientists acknowledged what the fishers proclaimed, but what difference did it make? How did overfishing become the result of the 1800s in the first place? Answers appear in the presentation of the history of Dutch cod fishing in the North Sea in the 1800s. It is in chronological sequence and the subsections correspond to how fishing business coped with national and institutional changes at the time. This indicates an answer from fisheries management, but the subsections hold arguments provided by the cod fishing business itself.¹²¹

¹¹⁹ The lectures were published, see Jakob Jakobsson; *ICES and the problem of overfishing*; Stockholm 1999 Centenary Lectures, ICES Cooperative Research Report; No.260, p.20-40, ICES 2003

¹²⁰ Garstang W.; *The impoverishment of the sea – a critical summary of the experimental and statistical evidence bearing upon the alleged depletion of the trawling grounds*; Journal of the Marine Biological Association; 1900, vol.6, p.1-69 presented in Smith Tim; *Scaling Fisheries*; chap.3

¹²¹ Part of this chapter is a rewrite of Overgaard Christine; *Managing Dutch cod fishery in the 1800s*; Fisheries Management in a Historical Perspective, Proceedings of the 12th Conference of the North Atlantic Fishing History Association Norfolk, Virginia, USA, August 19-22, 2009, [forthcoming]

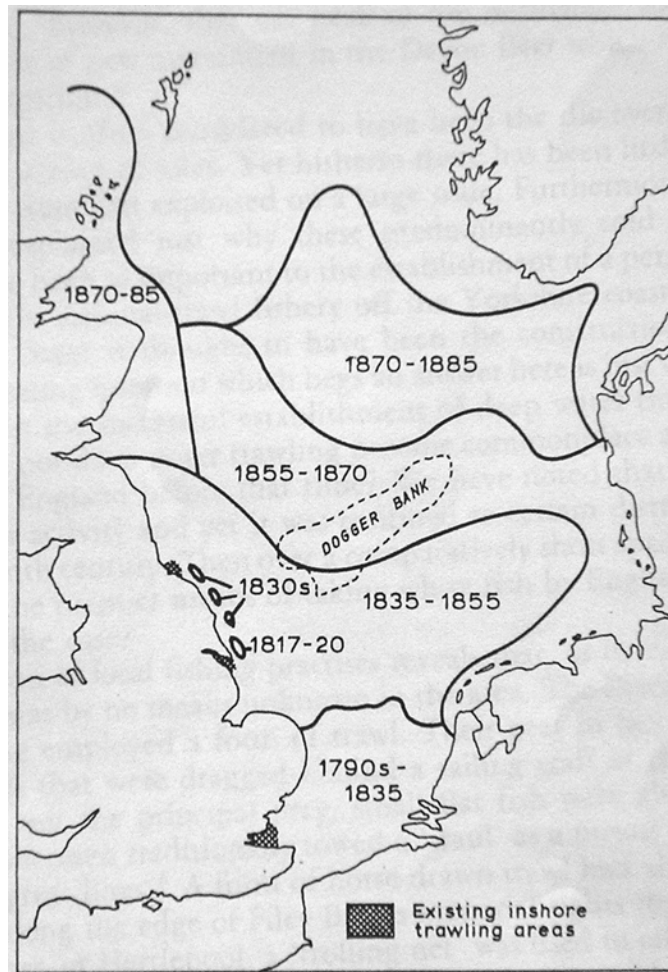
The origin of overfishing?

Fishing in the North Sea prior to the French occupation

Because Garstang's results coincided with the real stream of British steam trawlers in the 1880s, the British trawling received attention. It became evident that trawling – fishing using a net drawn along the bottom of the sea – started hundreds of years ago, yet without the force of the steam driven vessel. It took place in the English Channel in the late 1700s and slowly moved North into the North Sea and up along the West coast of England reaching the Doggerbank in the middle of the 1800s. Usually the trawl caught flatfish living at the bottom of the sea, but the English trawl probably also caught demersal fish, like cod. The Dutch coastal fishers fished in the same area as the English fishers near the English coast due to an old permission from the English. They fished for cod using baited hooks and line, or nets. They grumbled, saying the catch was bigger back in time.¹²² The Dutch cod fishers practising *beugvisserij* in the North Sea did not complain about catching less cod, but they complained about their herring catches at sea, leading to the allocation of the financial support, *premie* to herring fishery at sea in 1775 and to the coastal herring fishing in 1788.¹²³ *Beugvisserij* received no support at the time, though the

¹²²Kranenburg; *De Zeevisserij van Holland in den Tijd der Republiek*; p.141 and Vermaas; *Geschiedenis van Scheveningen*; p.1-6

¹²³see **Dutch cod fishing prior to 1800** and Thomas Simon M.; *Onze Ijslandsvaarders*; p.224 and Vermaas; *De Haringvisserij*; p.10-11

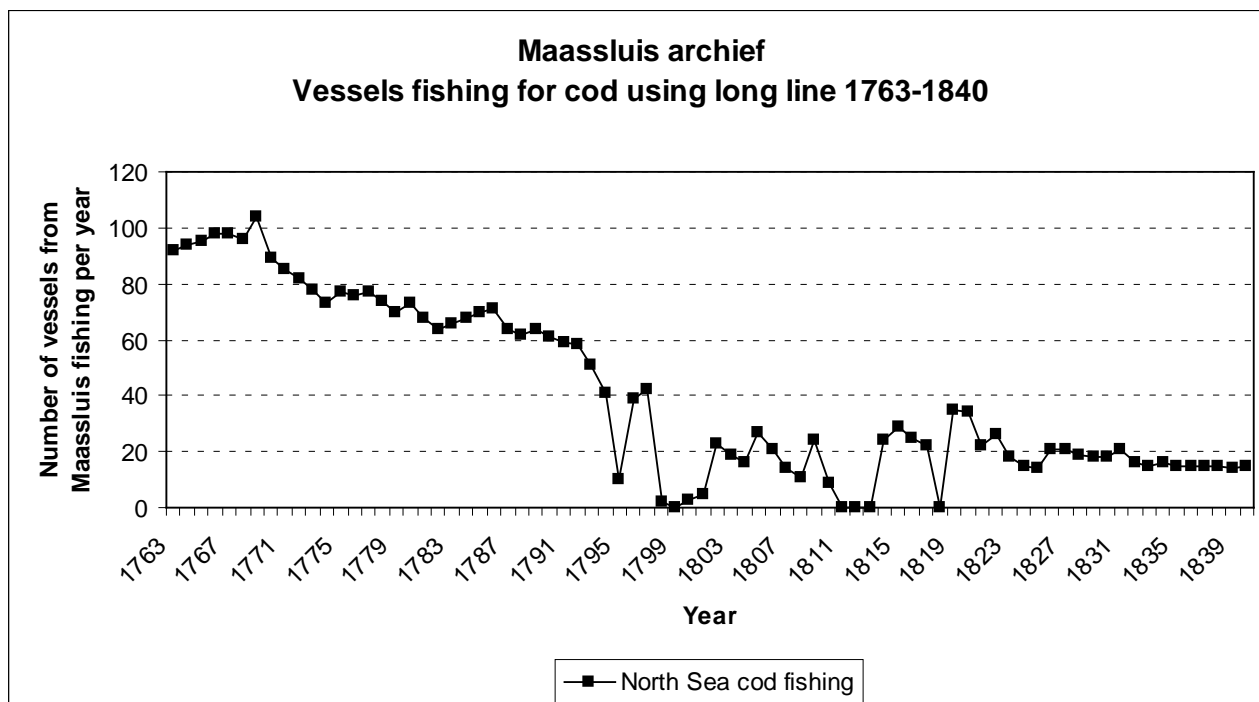


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number of vessels fishing for cod in the North Sea dropped. The Dutch authorities recorded changes in fishing in the late 1700s in the national yearbooks, saying herring fishing along the coast declined, while cod fishing at sea remained steady.¹²⁵

¹²⁴ The map of the movement of the English trawling was presented by Robinson Robb; *The rise of trawling on the Doggerbank grounds, the diffusion of an innovation*; *Mariners Mirror*; 1989, vol.75, p.79-88 inspired by works of D. H. Cushing and Tunstall Jeremy; *The Fishers*; chap.1, London 1962

¹²⁵ Kranenburg H.A.H.; *Vlaardingen's visserij van 1750 tot 1795*; *Historisch Jaarboek Vlaardingen*; 1979, vol.3, p.69-82 *Historische Vereniging Vlaardingen*



¹²⁶ The fishers and ship owners' proclamation that they caught more back in time may be true. At least, more vessels made a living from fishing, and chose to resign in the second half of the 1700s.

The occupation of the Northern and the Southern provinces by the French

Following the Golden Period was a time of economic stand by. There had long been a divide between the Northern [now the Netherlands] and Southern [now Belgium] provinces. In the North, the population was protestant and the provinces kept a high degree of self-governance in a federal type of union. In the South, the population was catholic and the provinces remained loyal to the Spanish crown, the former conqueror of the provinces. Several wars between England and the Northern provinces, known as the Dutch Republic, in the 1700s wore down the country. The fishers using *bom* vessels along the coast suffered severe loss or damage by the English, even when drawing the *bom* up on the beach. They had to hide them behind the dunes, but such action was not an everyday activity, it involved many people and horses and much effort, and then the vessels were not available for fishing.¹²⁷ The fourth English war was from 1780-1784, allowing England to take the lead as a maritime nation depriving the Dutch its identity as

¹²⁶ Stadsarchief Vlaardingen, not registered material, no.490, "*Lijsten van alle zodanige Schepen als te visschen zijn uitgevaren van Maass-Sluijs het zij naar de Noordszee, Ysland of ten Haring die vrij van s'Lands Impost opgegeven door Gecommitteerden van de Visscherij te Maass-Sluijs Sedert den Jare 1763*" on the number of vessels from Maassluis fishing for cod from 1771-1810

¹²⁷ Baalbergen Willem ed.; *Zilver in de netten, Noordwijk als vissersplaats*; p.20-21, Noordwijk 1983

such.¹²⁸ They changed the fishing permission, making it impossible for the Dutch to reach the usual fishing grounds near England.¹²⁹ On top of this, in the 1780s: the Patriots, in opposition to the ruling governor in the North, wanted to re-establish the economic situation of the Golden Period as a means of advancement. This was not possible though because the times had fundamentally changed. They also wanted new rulers, and started insurrections. The kings of France, Prussia, and Austria feared similar demands and uprisings at home; they intervened, stopped the Patriots and rescued the governor of the Republic, William V. Some Patriots fled to France, where the French revolution succeeded a few years later in 1789. In 1792, the French occupied the Southern provinces and declared war on the Northern provinces and England in 1793, annexing the Southern provinces to France in 1795. Governor William V fled to England, and the French sent an administrator to the Dutch Republic, who reorganized its administrative structure and its judicial system. He also cooperated with a parliament of former Patriots. It was a time of changes of otherwise well established formal rules and institutions.¹³⁰

The maintenance of fishing by shipowners during occupation by the French

As part of national cutbacks, the now so-called Batavian Republic decided to close the business organization: *Groote Kollegie*, which administered Dutch herring fishing at sea. This did not please the ship owners and they convinced the authorities that the *Groote Kollegie* must remain under different conditions, which the ship owners suggested themselves.¹³¹ The French accepted the informal constraints - and added a permission for all fishers in the Batavian Republic to salt herring - whenever fishing was possible. What is interesting to cod fishing is not just that most of the ship owners owned vessels fishing for herring as well as for cod, and thereby had some share in the decisions of the *Groote Kollegie*. It is interesting that the *Groote Kollegie* manifested its influence some years later by providing a draft on a law on fishing, decided on by parliament in 1801.¹³² The law primarily concerned the interests of herring fishing at sea, but it also considered rules on coastal herring fishing and herring fishing as bait. The Dutch had strong organizational

¹²⁸ Brouwer Albert, Vellekoop Ingena; De mazen van het net, Vlaardingse en Maassluisse schepen onder Oostenrijkse vlag tijdens de Vierde Engelse Oorlog; Historisch jaarboek Vlaardingen, 1989 vol.13, p.81-92 Fishers applying for permission to go fishing wrote that the English fishers benefitted from protection by the Royal Navy, may the Dutch obtain the same? The answer was no fishing was allowed

¹²⁹ The English allowed the Dutch to fish so close as they could get within 20 hours, knowing they would not reach the usual fishing grounds near the English coast in their sailing vessels see Vermaas; De Haringvisserij; p.36-37

¹³⁰ North Douglas C.; Institutions, Institutional Change and Economic Performance; Cambridge University Press 1990

¹³¹ see Appendix 5 note 131 and note 133 and Appendix 6 note 131 and note 133 and note 561 for a copy of the new conditions to the *Groote Kollegie*

¹³² Vermaas; Geschiedenis van Scheveningen; p.39 and Vermaas; De Haringvisserij; p.32,33,34,39-49 and Nationaal Archief, Algemeen Archief inv.686 law of 28.07.1801 The headline of the law being: *Gelijkheid, Vrijheid, Broederschap* assuring the French supremacy

traditions, emphasizing their informal rules, affecting their institutions.¹³³ Because of recurring resurrections and another French war with the English culminating in a continental blockade against the English from 1810, Napoleon replaced the administrator in the Batavian Republic with his brother, Louis, and annexed the Northern provinces to France as well.¹³⁴ Formally, there was no fishing in the North Sea thereafter, yet some fishers made a living from circumventing the continental blockade with for example agricultural products, or they obtained trade licence and fishing license in neutral ports to continue working, while many others suffered from insecurity, unemployment and poverty.¹³⁵ It is therefore noticeable that from the 1790s the English went trawling the Southernmost North Sea. The French joined them to some extent as their administration following the revolution in 1789 set aside a decision from 1681 granting the French Admiralty a legislative power concerning fishing, leaving the coastal fishing in the Channel free to French fishers.¹³⁶

Regulating and supporting Dutch cod fishing financially

The need for new vessels, new gear and new spirit in the fishing business

The French withdrew from the Batavian Republic in 1813, and the subsequent Vienna peace congress in 1814 decided that the Southern and Northern provinces should unite, forming the Netherlands, receiving the former Dutch colonies except Guyana, Ceylon [now Sri Lanka] and the Cape Colony [now South Africa] in return from England. After the restoration of peace, Dutch fishing business had difficulties resuming capacity prior to the occupation. The common perception says that for almost 30 years, Dutch ship owners and fishers lacked resources for their business and had to accept vessels being held up by either the French or the English and taken custody of during war time. Research shows how ship owners managed their business well and got through war time better off than most people. Still, fishing business needed new vessels, new gear and new spirit. Peace encouraged the son of the former governor Willem V, to make his appearance in the Netherlands, and the Dutch population showing their disapproval with the French and the

¹³³ see Appendix 5 note 131 and note 133 and Appendix 6 note 131 and note 133 and note 561 on the rules on coastal herring fishing and fishing for herring as bait

¹³⁴ Kossmann E.H.; *The Low Countries 1780-1940*; chap.1-2

¹³⁵ Kees Zijlstra; *Shipperen in de Franse tijd*; 2003 and Nationaal Archief 3.11.04 inv.122 *Décret Impérial relative aux pêches de la morue, du hareng et du poisson frais, Extrait des Minutes de la Secrétairerie d'État, 25.04.1812* and *Désignation, Des Point de rassemblement de Pêche du Poisson frais, dans les Arrondissements maritimes de Hollande et d'Anvers, Annexé au décret du 25 avril 1812* and Romburg C.P.P. van; *Visserij in oorlogstijd*; p.7-20

¹³⁶ Estancelin L.; *Des Abus de la pêche côtière dans la Manche*; *Annales Maritimes et Coloniales, Partie non Officielle*; 1835, vol.20, no.2, p.209-230

republican ideology welcomed him as their king, Willem I. Some intellectuals in the Netherlands kept supporting a republican state, but the group considering the draft for the Dutch constitution included the new king in the approval, assuring him the ultimate position in a constitutional monarchy of the Netherlands. In the institutional frame, the Parliament had two chambers, one with 50-60 members elected by the king for life, and one with 110 members elected by the provinces, deciding on the laws and the budget. The king had his own consultative state council of selected persons, the provinces each had a governor, and each city and province had a council of elected representatives; in fishing communities the local councils had direct relations with fishing business.¹³⁷

The application for financial support from those fishing for cod in the North Sea

The French tailored the law on fishing to French interests during their occupation, so in 1814 the Dutch did the reverse. They returned to “their own” law of 1801, and they reversed the permission for any herring fishers to salt herring, for the sea fishers to retain monopoly on salted herring, manifesting the old hierarchy within Dutch fishing business at the beginning of the 1800s. Fortunately, the king and the national parliament lifted the annual tax on 150-200 tons of salt for herring and cod, granting the ship owner 3 *guilder* each time his vessel landed 14 tons of salted North Sea or Iceland cod for export, in plumbed barrels.¹³⁸ They also lifted the tax on salt used by coastal cod fishing vessels having a *gaffel*-, a *braam*-, and a *top*-sail and a crew of eight.¹³⁹ Although a helpful initiative, cod fishing still suffered the consequences of the occupation. King Willem I was keen on helping his country by developing its businesses and internal structures, using both his public and private means when pursuing what he considered progressive initiatives. He and his consultative state council planned the policies for the fisheries management. If the members of the chambers in parliament agreed with him the proposals became formal law, otherwise the king had his own ways of realizing his ideas. Concerning cod fishing, King Willem I resumed the annual *premie* to vessels fishing for cod near Iceland, to set off their financial loss caused by severe weather conditions and damage to vessels and fishing gear.¹⁴⁰ Some ship owners having vessels fishing for cod in

¹³⁷ See **The Institutional Analysis and Development Framework and the arguments** on linking levels of analysis and Kossmann E.H.; The Low Countries 1780-1940; chap.3 The provinces resumed their Dutch names and territory such as Holland or Zeeland

¹³⁸ Nationaal Archief den Haag; no. 3.11.04, inv.122, law of 15.09.1816 article 41-44 It seems cod were exported in plumbed barrels like herring – this is the first affirmative evidence I have come across

¹³⁹ Nationaal Archief den Haag; no. 3.11.04, inv.122, law of 15.09.1816 article 41-44 this seems a way of differentiating the bigger coastal vessels from the smaller ones fishing near the coast going back and forth the same day; accepting the *bom* vessel, but excluding the *pink* vessel, see Haalmeijer Hans, Vuik Dik; Buizen, Bommen, Bonzen en Bidders; p.112-116

¹⁴⁰ Nationaal Archief 3.11.05 inv.1 p.1 By coincidence, P. Kikkert was at the time secretary at the *Groote Kollegie* administering the *premie* for herring fishing and the *Kollegie van de Ijslandse Kabeljauwvisserij*

the North Sea during wintertime responded to the news by sending their vessel to Iceland in summer. Simultaneously, they felt their vessels practising *beugvisserij* in winter were in an equivalent need for support, as winter storms were tough on their gear. They suffered high prices on repair, fishing gear, and provisions, and the insurance refused coverage because of increasingly harsh weather conditions and damage to the vessels. Their income declined as the national price of cod declined and the French raised their import tax on salted cod.¹⁴¹ The *harington* or the barrel must have a brand, a stamp or a stigma proving its worth containing Dutch salted cod (or herring) and its origin being caught by the fishers on a vessel belonging to a Dutch ship owner in a Dutch fishing town recognized by the authorities in that town. If not, the Dutch fish market was not allowed to legally sell the salted cod (or herring) as such. The local authorities in the fishing towns set the rules on branding the barrels and controlling the use of branded barrels.¹⁴² Encouraged by the secretary of the *Kollegie van de Ijslandse Kabeljauwvisserij*, the ship owners applied for *premie* for winter cod fishing, enforcing their argument complaining that before the war and occupation by the French thirty years ago, eighty vessels went fishing for cod each winter, while in 1817 only eight vessels went for cod.¹⁴³ Although keen on revitalising his kingdom, the king did not just answer their request. He wanted to know exactly what prevented an increase in production asking for details on the winter cod fishery, containing necessary documentation on why they did not sustain their business themselves and how it might recover if supported. Issues like upkeep of the port or dikes, stopping the silting up of the river or better transport facilities inland might be equivalent alternatives to any investments bettering the conditions for fishing.

A provisional agreement on financial support for North Sea cod fishing

In their response to the king, the ship owners of the North Sea vessels underlined the coherence of the seasonal fishing. They explained how the current situation enforced a continual winter fishery in spite of deficit, keeping the fishers employed all year, avoiding recruitment by shipping or foreigners. They had become afraid; an eventual disappearance of *beugvisserij* would consequently kill Dutch sea fishing. In addition, the ship owners were aware of coherent businesses' dependence on their fishing, such as shipyards and

administering the *premie* for cod fishing near Iceland see Voort J.P. van der; Het kollegie van der groote visserij; Tijdschrift van de Historische Vereniging Vlaardingen; 1973, vol.3, p.53-60

¹⁴¹ Nationaal Archief 3.11.05 inv.1 p. 4-5 and Struijs Matthijs A.ed.; Om een bevaeren schip te maecken. Geschiedenis van de Vlaardingse Scheepswerven; Vlaardingen 1997 By the end of the French occupation of the Netherlands, France introduced an import tax on salted cod high enough to render Dutch export impossible: 60 franc per *harington*, the name of the barrels containing fish like cod, 30-32 salted cod to a barrel

¹⁴² Vliet Adrie P. van; Van de Affslag van de Zouten Vich en de Haringh de Zierikzeese Visafslag en Vismarkt; Jaarboek Vereniging Stad en Lande van Schouwen-Duiveland; p.14

¹⁴³ See **French records and Dutch comments**

producers of barrels, reefs, hooks and baits.¹⁴⁴ The ship owners specified geographically, where the vessels went fishing at what time of the year. They documented the rig-out of their vessels, including the amount of salt they brought, by having authorities' recognition of their departure. The vessels used for *beugvisserij* were similar, and often the same, to those used for cod fishing near Iceland or for herring fishing in summer. If supported, local employment would be sustained, and the fishing business might gain its former strength, they argued. The ship owners' arguments brought no renewal into fishing business though, such as improving the educational standard of the employees, applying new techniques within production or expanding the market of Dutch cod. Nevertheless, a provisional royal decision was made on 6 December 1818, supporting winter cod fishery in the North Sea for a three-year period, on certain conditions.¹⁴⁵ In case the fishers went fishing in the North Sea, in December and January within 55°-56° latitude N, North of *Doggersand*, Easterly 10-12 miles off the coast of Jutland, and in February and March within 56°-57° latitude N, at the big *Fisherbank* or up against the steep *Doggersand*, they were entitled to 500 *guilder* per vessel per season. On 1 June, ship owners from each fishing town, applying for support, must supply to an annual report, containing the number and name of vessels fishing for cod and their catch. In addition, they must document the rig-out of the vessels to prove their part in fishing, including duties paid. At first, the owners' informal wishes and the king's "formal" demands corresponded well.¹⁴⁶ Later, as rumours had it that the ship owners from Maassluis and Vlaardingen obtained the royal grant, more ship owners from smaller fishing towns like Pernis, Zwartewaal and Middelharnis along the river Maas wanted their share, and conditions must be specified.

Meanwhile, the king decided on a new law on fishing replacing the law of 1801, assuring the *Kollegie* as an organizational framework for fishing business in the province; *Groote Kollegie* and *Kleine Kollegie* representing respectively herring fishing at sea and along the coast.¹⁴⁷

Cod fishing at sea receiving support, joining a *Kollegie*

During the French occupation, guilds, lodges and similar professional co-operations had been abolished, so for the ship owners to maintain their *Kollegien* was extraordinary. In 1819, the ship owners in Vlaardingen and Maassluis elected the representatives Jan de Willigen and Adrianus de Jongh to form a *Kollegie* to winter cod fishing in the North

¹⁴⁴ Nationaal Archief 3.11.05 inv.1 p.17-31

¹⁴⁵ Nationaal Archief 3.11.05 inv.1 p.32-34 and *Besluit van 06.12.1818 Staatsblad no.42*

¹⁴⁶ North; Institutions; p.22 ship owners and fishers accepted the controlling restraints on fishing in order to receive support; thereby the institution alias the king influenced their decisions

¹⁴⁷ See Appendix 7 note 147 and 523 on the differentiation in herring produce according to law of 12.03.1818 article 13-18

Sea.¹⁴⁸ They were to coordinate the administration of cod fishing making sure to comply with all requirements, including information from all towns in the report to the provincial council of Holland and to the ministry of interior affairs. Along the way, the *Kollegie* dealt with whatever else came about in relation to Dutch cod fishing.¹⁴⁹ The well-established *Groote Kollegie* protested against an inclusion of ship owners from the smaller towns into the *Kollegie van de Ijslandse Kabeljauwvisserij*. First, because most vessels used for fishing from the smaller towns were *chaloups*, not *hoekers*. These vessels were not capable of fishing for cod near Iceland, or even as far as in the North Sea beyond 54°-55° latitude N, they said. Second, the small town fishers did not salt three thirds of the cod, rather they would stay fishing along the coast, keeping all fish alive in the bun basin, selling them fresh at the market. They only salted dead fish from the basin, providing a low quality product compared to the cod salted when caught at sea. In the annual report of 1818-19, *Kollegie van de Ijslandse Kabeljauwvisserij* replied to the *Groote Kollegie* saying some *chaloups* from Pernis salted all their cod caught at sea this winter, while others from Delfshaven kept the cod alive, indicating it was not the type of vessel, nor the home town, but the captain's conduct that mattered. They mentioned that coastal fishing, keeping cod fresh, did not imply expenses for salt, barrels and bait, nor for long-term provisions for the crew. In case the vessels remained near the coast they did not expose themselves to extreme weather conditions, nor did they risk their gear or vessels to the same degree, as did the fishers at sea. Coastal fishing resembled *kolvisserij*, but *kolvisserij* did not commence until April or May, and it did not receive any grant from the king. Were the summer cod fishers aiming at obtaining financial support by starting fishing at an earlier date than usual or were the herring fishers fearing a suspension of their long unspoken clause separating the different branches of fishing and matching superiority of herring fishery? The Netherlands consisted of 17 provinces, 9 of which remained, when Belgium seceded in 1830. These provinces had had independent rule till the French occupation, like the German or the Italian provinces, and though they on an overall level acted as a union thereafter, locally they kept their competitive preferences. Bearing this in mind, helps to understand the importance of distinguishing between types of fishing.

The permanent but informal financial support for North Sea cod fishing

¹⁴⁸ Law of 15.03.1818 no.15 Jan de Willigen and Adrianus de Jongh also represented their towns in *Kollegie van de Ijslandse Kabeljauwvisserij* and the two *Kollegien* on cod fishing amalgamated under the Icelandic name. Nationaal Archief 3.11.05 inv.1 p.44. P. Kikkert became secretary of the *Kollegie* on cod fishing in the North Sea. He kept the records on cod together, and referred to the committee members as

“*gekommitteerden tot de Ijslandse kabeljauwvisserij in Zuid-Holland*” while treating the North Sea fishery

¹⁴⁹ See Appendix 8 note 149 on the *Kollegie*'s recognition of the captain's swearing-in prior to fishing

Because of the ship owners' mutual disagreements on cod fishing, the king specified his demands on 13 November 1819.¹⁵⁰ Winter cod fishing not only must meet the requirements set in 1818. The vessels must have a cargo of 20 *harington*, 14 of which were under the hatch, and at the same time keep a bun basin holding 3-400 live cod. The crew must be of twelve men, they must bring twenty-four barrels of salt, and they must fish for cod throughout the four months of December-March between 55°-57° latitude N. They must land at least half of their catch as salted cod. Finally, a *keurmeester* must certify all data and send them to the king along with the annual report. In case of any mistakes or lack of approval, a reduction in support would happen. The king in the person of the minister of industry checked the certificates, approved them and passed them on to the provincial council of Holland for adoption. The deputies in The Hague then passed their decision on to the local authorities for execution, forwarding the money to the secretary of the *Kollegie van de Ijslandse Kabeljauwvisserij*, who paid each ship owner his share.¹⁵¹ The ministry supplied the money for the *premie* for the first three-year probationary period, but as the period expired, the national government refused to continue the financial support. The king had to stop from supporting fishing business or find other means of doing so, and he chose the latter. Prussian initiatives on financing foreign trade through funds inspired king Willem and he established similar funds in the Netherlands. First *het Amortisatie-Syndicaat* in 1822, and then *het Fond ter Aanmoediging van de Nationale Nijverheid* in 1825. A newly imposed customs duty on import, export or transit of goods provided the financial basis of the funds. The formal argument was a refund of the national debt, and *het Amortisatie Syndicaat* acted like a national bank to the Netherlands receiving the income from the duties, but the king being a board member along with the financial minister, Netscher, led money secretly from *het Amortisatie Syndicaat* via *het Nationale Nijverheid* to whatever projects he supported.¹⁵² Hereby, King Willem I personally representing the national institutions, maintaining the formal frame, extended the *premie* to the Dutch fishing business, paying indirectly and informally using duties on fish for export among other things. The provisional law on cod fishing at sea became permanent in December 1822.¹⁵³

The application for financial support from those fishing for cod along the coast

¹⁵⁰ Nationaal Archief 3.11.05 inv.1 p.62-67 "Besluit van 13.11.1819 nb.1"

¹⁵¹ Nationaal Archief 3.11.05 inv.40 p.1103-1108, inv.11 p.173-177, 188-189, inv.12 p.238-239, inv.18 p.623-624, inv.23 p.773, inv.24 p.795,

¹⁵² Zappey W.M.; *Het Fonds voor de Nationale Nijverheid 1821-1846*; p.27-42 describing the *Beginnelsenwet* of 12.06.1821 no.9 on duties and its protectionist revision of 26.08.1822 no.38 and 39 and the secret royal decision of 30.06.1825 no.96 on the *Nationale Nijverheid* and its connection with the *Amortisatie-Syndicaat*

¹⁵³ Law of 31.12.1822 no.40 and North; *Institutions*; 1990

Once coastal ship owners realized ship owners of sea fishing vessels received financial support from the king, they desired the equivalent, and when the provisional law of 1818 was up for revision in 1822, it included coastal fishing; the king and the parliament acknowledged the *Kollegie* on coastal fishing, while the provincial governor took care of the actual establishment. The members, the president and the secretary of the *Kollegie van de Kleine Visserij* were selected and sworn in by the governor at an extraordinary general meeting in May 1823.¹⁵⁴ They also ratified the technical measures concerning coastal fishing similar to those on sea fishing. At its first ordinary meeting, the *Kollegie* adopted a set of instructions for the secretary's work and they agreed on a seal for the *Kleine Kollegie* and its layout. The members of the *Kleine Kollegie* decided on writing the king emphasizing the need for financial support to the coastal cod fishing, suggesting 400 *guilder* per vessel.¹⁵⁵ Then, the debate on financial support to coastal cod fishing began.¹⁵⁶ Contrary to herring fishing, ship owners of vessels practising coastal cod fishing did not define the criteria themselves. Instead, the policy and planning institution in the person of the king and the parliament introduced its own ecological based management, saying the vessels must practise *beug-* or *hoekwant visserij* continuously from November 15 to February 15.¹⁵⁷ They must not use *schrobnet* with meshes smaller than three *duimen* times nine *strepen* along the coast at any time, while meshes bigger than this were accepted at sea, nor must they use any *schrobnet* along the coast from November 15 to February 15; nets for shellfish being an exception. In the end, the king and the parliament applied indirect economic measurements by granting coastal cod fishing a financial support of 250 *guilder* per vessel per season, paid for by *het Fond ter Aanmoediging van de Nationale Nijverheid*.¹⁵⁸ At its second ordinary meeting in 1823, the *Kollegie* adopted the instructions for their own work.¹⁵⁹ The formally defined proceedings of the *Kleine Kollegie* and the coastal fishing probably had less to do with cod fishing and more to do with the privilege of salting herring; there is an amazing similarity between the regulations for the *Kleine* and *Groote Kollegie*.

The informal financial support for cod fishing along the coast

In 1826, came the input control and technical measurements of coastal cod fishing. They came in the shape of a *Notificatie*, a regulation provisions, amplifying a law of 25.11.1825.

¹⁵⁴ Nationaal Archief 3.11.04 inv.1 p.2-4 and inv.122, law of 31.12.1822 no. 40

¹⁵⁵ Nationaal Archief 3.11.04 inv.1, *Kleine Kollegie* meeting on 04.06.1823

¹⁵⁶ Nationaal Archief 3.11.04 inv.1, *Kleine Kollegie* meetings on 10.09.1823 and 28.04.1824

¹⁵⁷ Charles Anthony; *Sustainable Fishery Systems*; Blackwell

¹⁵⁸ Nationaal Archief 3.11.04 inv.122 p.167-70, law of 15.11.1825 no.75

¹⁵⁹ see Appendix 9 note 159 and note 563 on the Regulations on practising coastal fishing in the province Holland and Appendix 10 note 159 and note 563 on the Instructions for the commissioners managing the coastal fishing in the state Holland and Appendix 11 note 159 on the oath the mates swear

According to the *Notificatie*, and in order to obtain support, the ship owners must make a written assignment to the *Kleine Kollegie* confirming their intention of fishing for cod, the name of the vessel and the first mate. By the end of season, the ship owner must again swear that his vessel actually went fishing, providing the date of departure at the beginning of season and the date of arrival at the end of season. The vessel registered must be fully covered, the length must be no less than seven Dutch *ellen* and six *palmen* and the width no less than four Dutch *ellen* and five *palmen*. The vessels using long line should bring no less than thirty sticks with flag and cork indicating the long lines when in use. The lines must be at least 330 Dutch *ellen* long, each providing 180 good, sharp, baited hooks. No other vessel, but those examined by the *keurmeesters*, registered and marked by the *keurmeesters*, meeting these criteria certified for coastal cod fishing, and only the ones fully meeting the criteria acquired full support of 250 *guilder*. This included the dragging of vessels onshore without hindering the usage of other vessels.¹⁶⁰ The local *keurmeesters* spent much time checking the fishing gear and the rig-out of vessels, making sure the coastal fishers paid tax and obeyed the law on fishing. One way of doing this was making sure no vessel brought *schrobnet* along for fishing from November 15 to February 14.¹⁶¹ Many, but not all fishers were literate, but Dutch captains must know how to read and write. Each fishing vessel got a copy of the *Notificatie*, and the captain was obliged to keep it onboard at all times, reading it aloud for the crew to become aware of their obligations. This extensive procedure became the basis of Dutch cod fishing business for the next thirty years.¹⁶² It even got standardized providing printed formula for the ship owners to fill out, and printed recognitions from the state governor in The Hague asking the ship owners to acknowledge receiving the support.¹⁶³ No one was obliged to engage, but the ship owners obtained no support unless satisfying the requirements.

Working to rules?

By imposing a special duty on the North Sea cod fishing vessels as well as the Iceland vessels, the ministry of industry and the province of Southern Holland financed the administration of the support. The duty covered expenses at the ministry of industry, the provincial council and the *Kollegie van de Ijslandse Kabeljaauwvisserij* on postage,

¹⁶⁰ Nationaal Archief 3.11.04 inv.122, *Verzameling van Wetten, Reglementen en Besluiten betreffende de kleine of kustvisserij van de provincie Zuid- en Noord-Holland* 1845 see a translation of the *Notificatie* in Appendix 12 note 160 and note 560 and note 565

¹⁶¹ Nationaal Archief 3.11.04 inv.122, law of 21.04.1826

¹⁶² Nationaal Archief 3.11.05 inv.1 p.135-38

¹⁶³ Nationaal Archief 3.11.05 inv.9 p.131-132, inv.10 p.149, inv.15 p.490-491, inv.21 p.714-715, inv.27 p.831, inv.31 p.864 To begin with, the minister of reference was the minister of interior, while later it became the minister of industry. This was not a matter of subject, rather it was the importance of keeping the same person in charge whichever his position

travelling to meetings, and a set annual wage to the secretary of 50 *guilder*.¹⁶⁴ After a few years, the king emphasized that the new members of the coastal fisheries committee must pay *lastgeld* like their colleagues to keep the committee running.¹⁶⁵ Apart from this, the new disposition of fishing seemed to work out well – maybe too well, as the king and the parliament passed yet another law restricting fishing along the coast of Holland, expressing concern for the seabed, the spawning area, and the habitat of juveniles. This time, they prohibited fishing using *singelnet* until two hours before and two hours after high tide from November 15 to February 1, again technical measures in an ecology-based management application.¹⁶⁶ The criteria were overwhelming to the ship owners and not always easy to comply with. Contrary to the Iceland fishery, the North Sea fishery often witnessed a reduction in support because of misconceptions of rules, misfortunes at sea or otherwise, and caused much correspondence between the minister of industry, the deputies at the provincial council of Holland and the members of the *Kollegie*.¹⁶⁷ Fishing was not the only profession receiving financial support from the king; shipbuilding also received support. From 1819, ship owners must buy their vessels at Dutch shipyards, resulting in numerous, traditional vessels, and a noticeable interest in shipyards among ship owners.¹⁶⁸ The king also financed a reformation of the roads in the country, and an improvement of the canals. He engaged in new projects of interest like the *Amsterdamsche Stoomboot-Maatschappij*, believing he encouraged new ways of running business. One of the reasons the parliament did not intervene was that the ministers only had the judicial right to audit the national accounts every ten years, allowing the king liberty of action for a long period. Another reason was the king pretended to be repaying the national debt by instalments while actually spending the money otherwise; for example supporting cod fishing.¹⁶⁹

¹⁶⁴ Nationaal Archief 3.11.05 inv.7 p.73-74, inv.40 p.1103-1108

¹⁶⁵ Nationaal Archief 3.11.04 inv.122, law of 15.09.1828 no.74

¹⁶⁶ Nationaal Archief 3.11.04 inv.122, law of 29.08.1837 no.56 and Charles Anthony; *Sustainable Fishery Systems*; Blackwell

¹⁶⁷ Nationaal Archief 3.11.05 inv.5 p.20-24, inv.6 p.65, inv.7 p.76-80, 87-90, 93-95, inv.8 p.112-117, inv.9 p.136, inv.11 p.161-166, 173-179, 181-185, inv.12 p.200-217, 225-228, inv.13 p.256-266, inv.15 p.492-498, inv.16 p.508-511, inv.17 p.515-511, inv.18 p.610-626, inv.19 p.656-667, inv.20 p.676-680, 691-699, inv.21 p.716-726, inv.22 p.743-752, inv.23 p.768-770, inv.24 p.788-794, inv.25 p.799-807, inv.26 p.814-818, inv.27 p.830-836, inv.28 p.842-843, 847-848, inv.29 p.850, inv.30 p.856-858, inv.31 p.881-885, inv.32 p.890-892, 912-913, inv.33 p.918, 920-924, inv.34 p.973-974, inv.35 p.986-989, inv.36 p.1007-1014, inv.37 p.1050-1055, inv.38 p.1073-1080, inv.39 p.1099-1100

¹⁶⁸ Struijs Matthijs A.; *Om een bevaeren schip te maecken, Geschiedenis van de Vlaardingse scheepwerven*; Vlaardingen 1997 tells the story of the ship yards in Vlaardingen but without mentioning the financial support

¹⁶⁹ Brugmans I.J.; *Paardenkracht en Mensenmacht*; p.84-100 and Zanden Jan Luiten van, Riel Arthur van; *The Strictures of Inheritance, The Dutch Economy in the 19th Century*; Princeton University Press 2004, p.96-104, 170-71 and Hopstaken J.M.W.; *De Katwijksche Maatschappij*; chap.3

Reactions towards regulations and financial support

Fresh cod or salted cod valid for financial support?

In the winter 1819-1820, by the end of the cod fishing season, *Kollegie van de Ijslandse Kabeljaauwvisserij* expressed difficulties accepting the dismissal of applications from colleagues landing fresh cod as they could not afford bait or salt.¹⁷⁰ The dilemma between landing fresh or salted cod on the one hand and safeguarding the means of survival to marginal producers on the other hand was a continual issue of concern over the years.¹⁷¹ Traditionally, the most sought-after product was salted cod, Iceland cod in particular. Yet, Iceland cod was the most difficult and the most expensive fish to catch; henceforth, the ship owners obtained financial support almost unquestioned.¹⁷² Second came the North Sea cod. As the French war and occupation set back Dutch fishing business, ship owners reconsidered profitability. For several years, ship owners from Pernis, Zwartewaal and Delfshaven chose not to meet the king's requirements by landing cod fresh, and therefore sent no applications for financial support.¹⁷³ By way of consolation, in March 1825 the smaller towns acquired a representative each in the *Kollegie* along with Jan de Willigen and Adrianus de Jongh from Vlaarding en and Maassluis respectively.¹⁷⁴ Ship owners elected Dirk Pons and A. Kwak from Pernis and Zwartewaal, and soon followed Cornelis Kolff from the town Middelharnis. Following discussions on the fresh cod/salted cod dilemma, the *Kollegie* recognized fresh cod winter fishery by *gaffel-* or *bezaan schuiten* as a particular branch of fishing, necessitous of proportionate support per season of 250 *guilder* per vessel. They asked the king for his recognition and support, and he accepted on certain conditions of course.¹⁷⁵ *Hoekwant* fishery resembled coastal fishery, yet *hoekwant* fishery went on during winter only. Now the question arose, whether the new *Kollegie* members from the smaller towns belonged to the *Kleine Kollegie* or to the

¹⁷⁰ Nationaal Archief 3.11.05 inv.1 p.81-83, 122-132

¹⁷¹ Nationaal Archief 3.11.05 inv.1 p.122-129, 144-45, 167-69, 202-213, inv.8 p.108-109, inv.9 p.133-134, 140-142, inv.11 p.158, 164-166, inv.12 p.197-198, 218-222, inv.13 p.249-251, inv.32 p.897-900, inv.35 p.982-985. and Pedersen Kurt, Strøjer Madsen Erik, Ulf-Møller Nielsen Jørgen; *Økonomisk Teori i internationalt perspektiv*; 4.udgave; DJØFs Forlag 1996 chap.5

¹⁷² Nationaal Archief 3.11.05 inv.7 p.91-92, 98-101, inv.8 p.119-120, inv.9 p.124-129, inv.10 p.148, 153-154, inv.11 p.169, 187-189, inv.12 p.191-193, 237-239, inv.13 p.241-243, 267-268, inv.14 p.270-271, inv.15 p.477-480, inv.16 p.500-502, inv.17 p.517-519, 542-545, inv.19 p.638, 643-644, 673-674, inv.20 p.676-680, 703-704, inv.21 p.720-730, 732-734, inv.23 p.765-766, 773-775, inv.24 p.795, inv.25 p.797-798, 808-809, inv.26 p.811-813, 824-827, inv.27 p.839-840, inv.28 p.845-846, inv.29 p.851-852, inv.30 p.854-855, inv.31 p.866, inv.32 p.910-911, inv.33 p.919, 932, inv.34 p.975-977, inv.35 p.990-991, inv.36 p.1016-1018, inv.37 p.1057-1058, inv.38 p.1087, 1089

¹⁷³ Nationaal Archief 3.11.05 inv. ??? references on the refusal

¹⁷⁴ Nationaal Archief 3.11.05 inv.1 p.188 "Besluit van 03.04.1818 nb.135", inv.5 p.12-13, inv.11 p.172, inv.12 p.223, 229-231, 235-236

¹⁷⁵ Nationaal Archief 3.11.05 inv.1 p.197-99 and Besluit van 15.11.1825 nb.75 published in *Nederlandsche Staatscourant* 30.11.1825

*Kollegie van de Ijslandse Kabeljaauwvisserij?*¹⁷⁶ The *Kollegie* members remained, while ship owners kept re-arranging their businesses.¹⁷⁷ The flexibility was requisite to fishing business and set criteria on Dutch produce were common. Still, it is hard to understand why fishing business kept fighting, while agriculture and horticulture did well and needed no regulations.¹⁷⁸ Fresh cod aimed for the local market like vegetables and most agricultural products.

The importance of the vessel

Some vessels from Pernis and Zwartewaal landing fresh cod, already took part in coastal fishing though the towns were not on the coast. They applied for and obtained financial support of 250 *guilder* per vessel, per year, if fishing near the coast, not at sea.¹⁷⁹ Strangely, ship owners from Middelharnis had difficulties joining the coastal fishery; Middelharnis lay up another branch of the river Maas compared to Pernis and Zwartewaal or Maassluis and Vlaardingen. The *Kleine Kollegie* argued the Middelharnis ship owners used *hoeker* vessels suitable for sea fishery instead of *bom* vessels used for coastal fishing, and therefore they did not consider them qualified for support. Another reason for refusing Middelharnis and not Pernis or Zwartewaal was jealousy of Middelharnis having a fish market at the mouth of the rivers Maas and Schelde leading to the inland markets of the Southern provinces, later Belgium and Germany. Middelharnis was a long time competitor. In 1678, a law confirmed the tradition of vessels passing the point *Goeresee Gat* landing and selling its fish at the market in Middelharnis. In 1740, a new fish market in the town Hellevoetsluis broke Middelharnis' monopoly, yet Middelharnis made a deal, a 10-year renewable contract with Hellevoetsluis accepting their market when paying a fee to Middelharnis. The deal lasted until 1806, and in the 1780s fishers from Schiedam, Pernis, Zwartewaal, Hoogvliet and Delfshaven made deals with Middelharnis on where to land and sell their fish.¹⁸⁰ The arrangements happened because the Northern provinces closed the Schelde ever since war and revolution against the Southern provinces in the late 1500s, preventing maritime access to the Southern provinces and Antwerp. The French marked a new era in Dutch maritime history that the fishing community must adjust

¹⁷⁶ Nationaal Archief 3.11.05 inv.1 p.200-202, the coastal fishery committee established in 1823 with the name "het *Kollegie* der Kleine of Kustvisserij". Nationaal Archief 3.11.05 inv.1 p.220-21 "Besluit van 31.12.1822 nb.40"

¹⁷⁷ Nationaal Archief 3.11.05 inv.1 p.216-20, 282-92, inv.2 p.17-26, 36-39, 48-49, 54-56, 164-185

¹⁷⁸ For example on sugar, beer and alcohol see Wintle Michael; *An Economic and Social History of the Netherlands, 1800-1920. Demographic, Economic and Social Transition*; Cambridge University Press 2000 p.153-154 and Zanden van, Riel van; *The Strictures of Inheritance*; p.52-60

¹⁷⁹ See **The records on financial support for cod fishing along the coast 1825-1853** on the different towns practising coastal cod fishery

¹⁸⁰ Verseput J.; *Middelharnis een eilandgemeente*; Rotterdam 1953 and Kuiper M.; *Vissers en Ventiagers*; Leiden 2011

to, by opening access to the Schelde river in 1792.¹⁸¹ Difficulties adjusting contributed to the discontent with Middelharnis now joining the coastal fishery. The *Kollegie van de Ijslandse Kabeljaauwvisserij* got involved, along with the mayor of Middelharnis, the state governor to the province of Southern Holland, and the minister of the interior. After some correspondence, the official conclusion was that any ship owner might refer to whichever *Kollegie* corresponded to his fishing. They endorsed that the captain's conduct mattered; that the type of vessel was subordinate. In reality, levelling the choice of vessel erased former distinctions between ship owners, including rights to fish on certain fishing banks.¹⁸² The role of the vessel as the fixed factor of production and as business indicator lost importance. The coastal fishers felt the sea fishers entered their territory. Even the fishers landing salted cod caught in the North Sea experienced a similar feeling. Most *hoeker-bun* vessels carried barrels of salted cod as well as the last lot of cod caught just before returning home. They kept this lot alive in the bun basin, and sold it fresh at the market. It was no easy job mastering the vessel, the fishing and salting using the exact amount of salt, catching the last lot of cod and returning home in order to get the best price at the market. Hence, not all hoekers had a bun.¹⁸³ Still, they were accepted as participants of the *beugvisserij*, like the fishers from Middelharnis became coastal fishers.¹⁸⁴ Social responsibility or professional solidarity?

Domestic problems and cod fishing

One wonders as another dilemma emerged. Did vessels originating from Zierikzee in the province of Zeeland qualify for royal support like their fellow colleagues from Southern Holland? If so, did their colleagues sympathize and cooperate? From correspondence between the minister, the state governor, the state deputies and the *Kollegie van de Ijslandse Kabeljaauwvisserij* it emerges that the ship owners from Zierikzee did meet the requirements yet they obtained only reduced support. When asked for an explanation the minister refused sending documents informing on the actual legal requirements according to which everybody else received support, fearing a future demand of full support similar to that arising from the fishers from the small towns along the Maas, but on a national scale. Only the state governor van der Duijn thought differently, reminding the politicians that they either considered Zierikzee an applicant along with those of Pernis, Zwartewaal and Middelharnis, or they did not consider any of them at all. Finally, three vessels from

¹⁸¹ Kossmann E.H.; *The Low Countries 1780-1940*; Introduction

¹⁸² Nationaal Archief 3.11.05 inv.1 p.223

¹⁸³ During all the years 1818-1853, vessels with no bun had their support reduced by 100 *guilder*. Nationaal Archief 3.11.05 inv.1 p.62-67 "Besluit van 13.11.1819 nb.1"

¹⁸⁴ Nationaal Archief 3.11.05 inv.1 p. 235-246, inv.12 p.229-231

Zierikzee were treated according to qualifications.¹⁸⁵ It seemed an unfortunate backdrop of the strong personal network within the fishing community. The Holland fishers liked to benefit from the Zeeland hospitality during the French occupation, but they did not seem to have been indebted to their colleagues when peace occurred. Similar discrepancy revealed on a national scale between the Northern and Southern provinces in the 1820s, making a unification of the new country difficult. An initiative on primary education made available throughout the country, missed the South because of language barriers. At the same time, more Southern entrepreneurs inland benefitted from financial support from the king than did Northern colleagues due to natural resources providing metal and coal for the industry. Therefore, the South industrialized, while the North barely did. The South connected to France rather than the Northern provinces, and workers in Brussels reacted to the July revolution in Paris in 1830. Willem I sent his army to calm down the revolt, but as France sent its army to defend the Southern provinces, Willem withdrew. A conference was set up in London to prevent war and reach diplomatic agreement on territorial questions, between the North and the South, but Willem I rejected the proposals for several years.¹⁸⁶ He felt betrayed and downgraded when seeing his engagement in entrepreneurial businesses in the Southern provinces rewarded by their deserting his country.

Colonial politics and cod fishing

All along, the vessels practising winter *beugvisserij* along the coast illustrated the impact of his support of 250 *guilder* per vessel.¹⁸⁷ Most towns kept a steady number of vessels fishing for cod. Scheveningen, the coastal fishing town with most vessels, had many vessels fishing for cod from 1825-1835, then the numbers dropped remarkably. Amazingly, the drop had to do with Dutch colonial politics. In the 1830s, a revision of the East Asian colonial politics eased the Dutch fiscal situation and indirectly the coastal fishing. The new idea was that the colonial people paid no income tax, instead they paid 20% in kind from their produce for the Dutch to bring back. This was the so-called "Culture-system". The gains from this colonial produce replaced customs duty as the means of payment to *het Fond ter Aanmoediging van de Nationale Nijverheid*. Hereby, the king augmented the financial support for coastal herring fishing in 1836 from 200 to 300 *guilder* per vessel per year. Theoretically, it then became more profitable for the coastal ship owners to send off vessels for herring than for cod, and it seems they reacted instantly, as the number of vessels using long line and hook for cod from Scheveningen dropped in 1836 and

¹⁸⁵ Nationaal Archief 3.11.05 inv.17 p.520-524, inv.18 p.629-636, inv.19 p.669-671, inv.21 p.727-728

¹⁸⁶ Kossmann E. H.; *The Low Countries 1780-1940*; chap.4

¹⁸⁷ See **The records on financial support for cod fishing along the coast 1825-1853** and graph on the winter *beugvisserij* 1825-1857

remained low thereafter.¹⁸⁸ It shows the ship owners' dependence on or desire for financial support. It is hard to tell the impact of the *schrobnet* fishing from 1813-1857 as it was not supported financially, it was prohibited during winter, and it did not report the catch along the coast like the two other fishing businesses. The mayor of Scheveningen from 1824-42, Mr. Cattenburch promoted the establishment of a harbour at Scheveningen, but the fishers were afraid it might have a negative impact on their fishing opportunities and they disagreed with the initiative. The fishers most likely figured out that if they had a harbour facilitating vessels with a keel, they invited their colleagues from up the river Maas to join them at the coast in their sea going vessels. Doing so with no legal adjustments concerning who cured the herring and who did not, the coastal fishers dug their own grave if sacrificing their prime advantage: easy access to sea and thereby to the fresh fish. Instead, Cattenburch initiated the digging of a canal from Scheveningen to The Hague and the big market for (fresh) fish.¹⁸⁹

French regulations and cod fishing

In 1835, a French deputy in the regional department at Somme in France expressed his utmost concern about the French coastal fishing in the Channel and its effect on the fish stock and the marine environment. He considered the situation:

*“Aujourd’hui les côtes, naguère encore les plus fécondes, sont devenues d’une stérilité don’t il est difficile de se faire une idée; les poissons indigènes disparaissent, le poisson voyageur, ne trouvant plus la pâture qui l’attirait, ne se fixe plus; il fuit sans s’arrêter. Ce désordre est évident, les causes qui l’ont produit ne le sont pas moins.”*¹⁹⁰

He recognized the regulations on the mesh size of the *chalut* (trawl) and the wooden blocks attached to the net keeping it open when drawn along, yet after twenty years of unrestricted use he saw vessels returning with less or no catch. Then, he described the effect of coastal fishing using the *chalut* as:

“...attaché au bateau à la voile, ce filet traîne au fond de la mer; il en laboure le sol, envelope et ramasse tout ce qui se trouve sur son passage; le petit poisson, qu’on croirait pouvoir s’échapper par les mailles, est retenu dans l’accumulation des matières

¹⁸⁸ The number of vessels for herring rose correspondingly, see Kramer R.; De visserij van de zijde in de eerste helft van de 19de eeuw; Holland: regionaal-historisch tijdschrift; vol.16, p.175-188, Historische Vereniging voor Zuid-Holland onder de Zinspreuk Vigilante Deo Confidentes, Ostborne 1984 – according to Nationaal Archief 3.11.03 inv.12, no.224-225, May 7th 1805, College van de Groote Visserij, the ship owners could apply for and receive support for each vessel once a year, meaning he must chose between either herring or cod fishing, see Thomas M Simon; Onze Ijslandsvaarders in de 17de en 18de Eeuw; p.228 and Kossmann E. H.; The Low Countries 1780-1940; p.162-164

¹⁸⁹ Vermaas; Geschiedenis van Scheveningen; p.347-349 There is no need to think, the coastal fishers lacked *ondernemingsgeest* as is commonly thought; they ran their business according to circumstances. See i.e. Baalbergen ed.; Zilver in de netten; p.15 on *ondernemingsgeest*

¹⁹⁰ Estancelin L.; Des Abus de la pêche côtière dans la Manche; p.211

*confondues et mêlées au fond de la chausse, et périt comme les gros poisons, écrasé, froissé par les rochers que laboure l'armature; les plantes marines, où le poisson trouve sa pâture, et où plus souvent il dépose son frai, sont arrachées, bouleversées; c'est une destruction permanente, continue, qu'exercent journellement plus de deux cent bâtiments à la voile, sur les côtes de la Seines-Inférieure, de la Somme et du Pas-de-Calais."*¹⁹¹

Is the correspondence between the appearance of the French concern for the fish stock and the marine environment, the Dutch change in financial support to fishing business and the geographical locations of the English trawling shown on the map a coincidental coherence or an expression of the consequences of the origin of overfishing?

Reductions in financial support for cod fishing

In 1839, as king Willem I was about to present his third ten-year-budget to the government, he "coincidentally" changed his mind and agreed to the conditions in the agreement with Belgium set up in London, confirming the separation into two countries, and subsequently in 1840, he abdicated. The parliament then discovered the existence of and connection between *het Amortisatie-Syndicaat* and *het Fond ter Aanmoediging van de Nationale Nijverheid*. A closing process began, corresponding with a reduction in support to the ship owners' vessels fishing for cod and in 1846, the ministry of interior definitively dissolved the fund.¹⁹² An amazingly open correspondence had taken place between the members of the *Kollegie van de Ijslandse Kabeljaauwvisserij* and the administrators of the ministries involved, leaving the ship owners with the impression their opinion made a difference. Mr. Netscher, from the ministry of industry, asked Jan de Willigen for advice several times concerning *hoekwant* fishers applying for support acting like *beug*-fishers. Already by the king's second ten-year-budget presentation in 1829, his loyal minister Netscher confidently asked Jan de Willigen how much support he considered appropriate for the winter cod fishery.¹⁹³ In his proposal, Jan de Willigen made a calculation suggesting a differentiation matching the amount of salt used and time spent at sea.¹⁹⁴ What he probably did not realize was that the government in 1831 put an amplified version of his proposal to the Statute Book.¹⁹⁵ From then on, reduction of support was executed in accordance with the king's requirements, irrespective of external circumstances such as bad weather conditions. Had the ship owners met the requirements at an earlier date, the government

¹⁹¹ Estancelin L.; *Des Abus de la pêche côtière dans la Manche*; p.213

¹⁹² Law of 09.05.1846 nb.33 The queen died in 1837, and as king Willem I remarried a Belgian catholic woman, he must abdicate (the formal excuse)

¹⁹³ Nationaal Archief 3.11.05 inv.1 p.291-292 Netscher was minister in the government and as such contact to the *Kollegien* via the Provincial Councils, but he was also the king's confidential and member of *het Fond ter Aanmoediging van de Nationale Nijverheid* and *het Amortisatie-Syndicaat* see i.e. Zanden van, Riel van; *The Strictures of Inheritance*; p.110-15

¹⁹⁴ Nationaal Archief 3.11.05 inv.1 p.292-293

¹⁹⁵ Nationaal Archief 3.11.05 inv.1 p.298-300

would not have intervened, Netscher said.¹⁹⁶ The tactic was complete. The fishers complained, their support was reduced, but the members of the *Kollegie van de Ijslandse Kabeljaauwvisserij* could do nothing as they introduced the reduction themselves.¹⁹⁷ Most reductions originated from divergence in time spent at sea fishing, just as Jan de Willigen proclaimed the case concerning the *hoekwant* fishers. Everybody had difficulties meeting this criterion, though not everybody admitted to the fact because a crucial problem was navigating the river to the sea. Hence, the new formal rule defining “departure” as leaving the mouth of the river for sea, instead of leaving port.¹⁹⁸ Some vessels managed silently, while others deliberately cut the season short by making only 1-2 trips to sea, staying in port for the remaining season, still claiming a need for support. This, the king said, contradicted the idea of the beneficence, which was to strengthen all branches of Dutch fishing preventing seasonal unemployment.¹⁹⁹ Surprisingly, no one came up with the idea of reporting the dates of every trip to sea as did the herring fishers in their reports to the *Groote Kollegie*, and thereby the king.²⁰⁰ The fact that the lack of maggot was no longer accepted an argument for delay did not seem to attract attention either. Consequently, winter cod fishery stabilized within the set criteria. Whenever an opportunity occurred to ask for help financially, the ship owners did so. Once, a Dutch fishing vessel assisted a foreign vessel in need, whereupon the owner claimed compensation from the loss of time fishing.²⁰¹ Another time, a ship owner claimed compensation from damage to his vessel caused by collision at sea.²⁰² Also, a ship owner claimed compensation and royal recognition on behalf of a French ship owner from Dunkerque whose vessel rescued the crew from the Dutch vessel being wrecked while fishing near Iceland.²⁰³ All compensations were complied with; a reduced support continued after 1846.

Which was the biggest threat to fishing business?

Amenability on one part might explain earnest concern on the other part. Going to sea fishing was one thing, selling the produce another. In 1818, when ship owners applied for the king's support, a weighty argument was the French protection of its national market

¹⁹⁶ Every 5 days' delay after 31st of December caused a subtraction of 40 guilder from the annual support of 500 guilder. Any vessel fishing without bun had another 100 guilder subtracted. Any vessel fishing for less than 3 months had no support at all. Nationaal Archief 3.11.05 inv.2 p.8-11 and inv.18 p.610-26

¹⁹⁷ Nationaal Archief 3.11.05 inv.2 p.32-36 The reduction in support might have been under way since 1826, yet the Belgian secession from the Netherlands and the economic decline accelerated its execution, see Nationaal Archief 3.11.05 inv.12 p.202-203, 213-217, inv.18 p.592-593

¹⁹⁸ Nationaal Archief 3.11.05 inv.20 p.681-683

¹⁹⁹ Nationaal Archief 3.11.05 inv.5 p.27-38 "Besluit van 06.12.1818 nb.42", p.46-50, inv.18 p.599-609 emphasizing the requirements for obtaining royal support

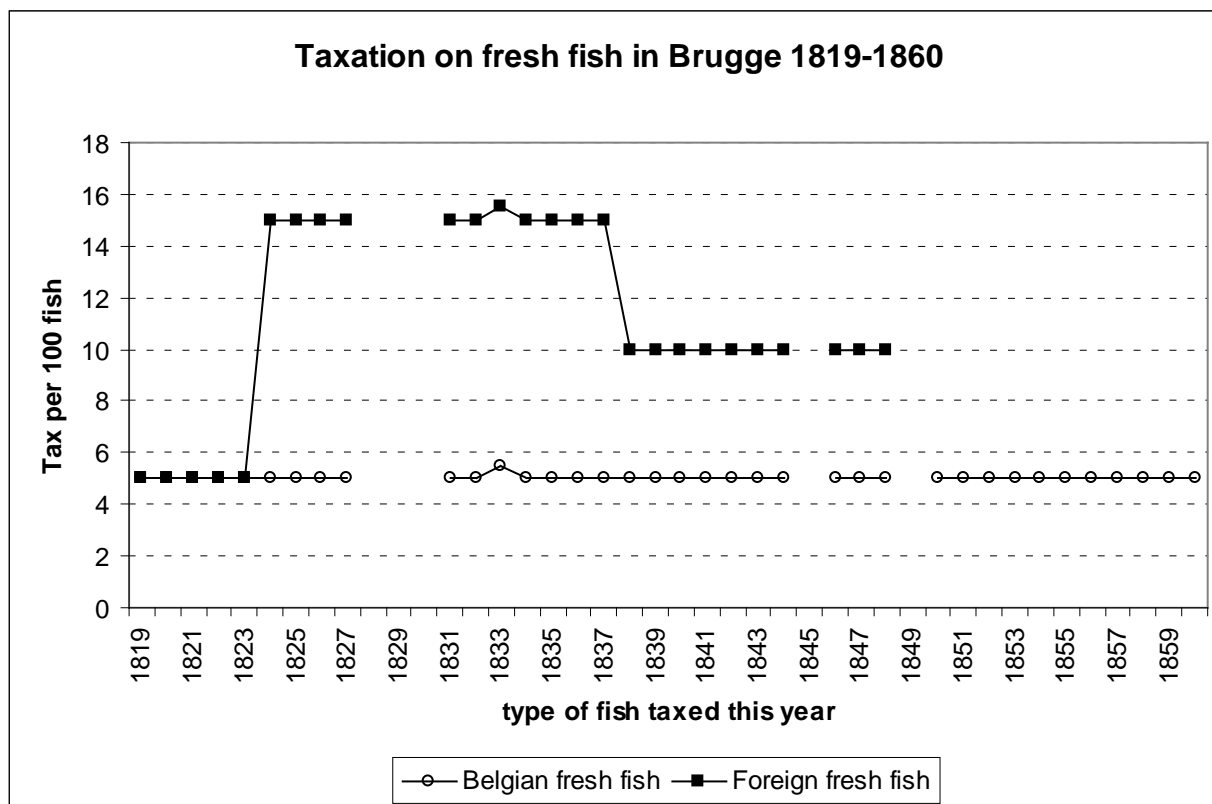
²⁰⁰ Poulsen Bo; *Historical exploitation of North Sea herring stocks*; p.126-138

²⁰¹ Nationaal Archief 3.11.05 inv.2 p.61-63, inv.22 p.753-761, 763-764

²⁰² Nationaal Archief 3.11.05 inv.2 p.145-146, 151-158

²⁰³ Nationaal Archief 3.11.05 inv.2 p.96-100, inv.26 p.828, inv.27 p.832-835

against the Dutch. Again, in 1823, the *Kollegie* repeated the argument as the French augmented their protectionist import tax on Dutch cod, now covering the Belgian provinces as well.



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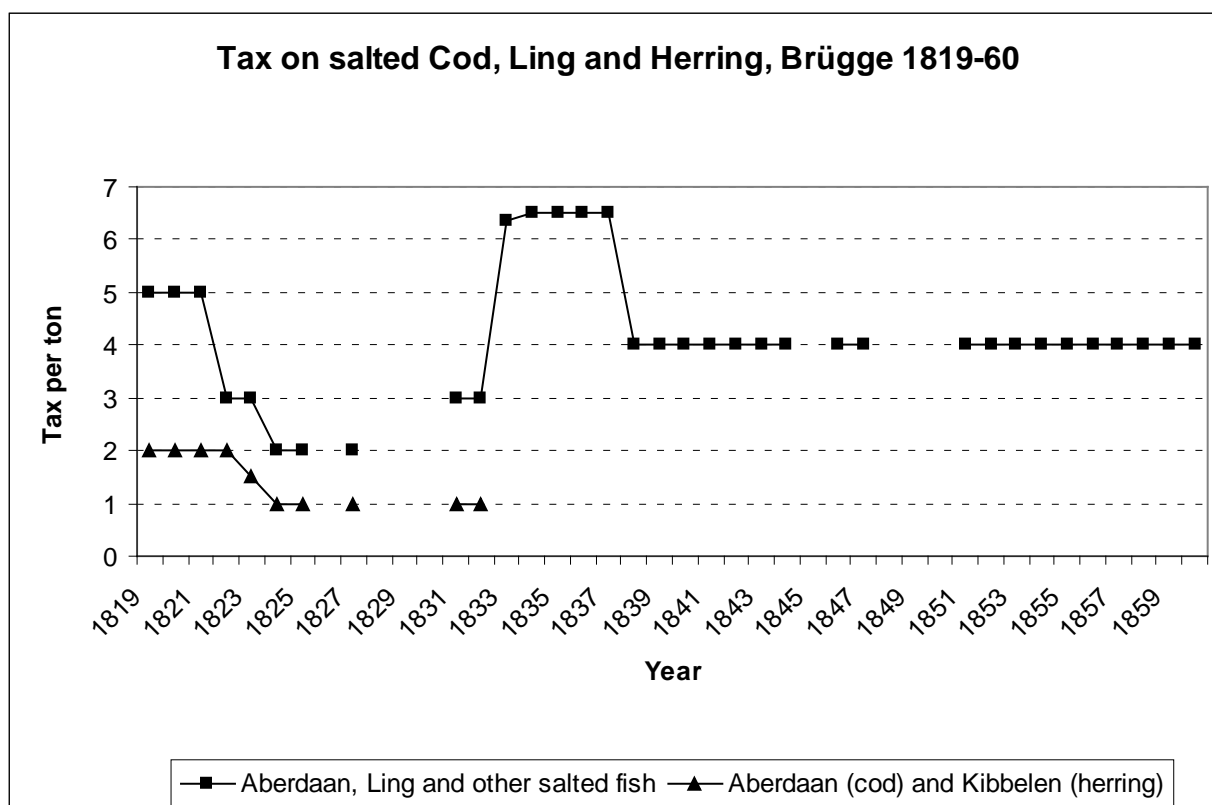
The *Kollegie van de Ijslandse Kabeljauwvisserij* emphasized that neither the catch nor the damage to the fishing vessels posed the biggest threat to fishing business; dissatisfaction with the low prices and reduced annual demand did so.²⁰⁵ They blamed a concession, agreed to by several Dutch and Belgian towns, for causing the low prices, and they expressed dissatisfaction with the balance favouring general consumer goods. After the Belgian revolution, the situation intensified. In 1841, 55 ship owners from five towns signed a letter to the minister of the interior asking for negotiations with the Belgian government on tax reductions, because taxes had doubled, and the Belgian fishers applied Dutch fishing methods for salted cod, while resigning from intra-trade agreements, which added to the Dutch fear of their fishing prospects.²⁰⁶ Though the minister of interior suggested the Belgian market was not the only possible market for Dutch cod, the *Kollegie*

²⁰⁴ I did not obtain data on all years, therefore the irregular graphs from Stadsarchief Brügge, *Provincialen Wegwyzer van West-vlaanderen en bijzonderlyk der stad Brügge voor het jaar..Fejl! Henvisningskilde ikke fundet.* and *Nieuwen en nuttigen almanach van het eerste Arrondissement van ontvang der provincie van West-vlaanderen en der stad Brügge voor het jaar...* and **Fejl! Henvisningskilde ikke fundet.** and **Fejl! Henvisningskilde ikke fundet.** on duties on different types of fish imposed by the town Brügge 1819-1860

²⁰⁵ Nationaal Archief 3.11.05 inv.1 p.162-166 on the correspondence with Mr. Falck at the ministry of industry and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.10,14

²⁰⁶ Nationaal Archief 3.11.05 inv.2 p.99-111

van de IJslandse Kabeljaauwvisserij kept expressing its fear. In 1842, it produced a brochure on the importance of the Dutch fishing business for the politicians to succeed in negotiations.²⁰⁷ An agreement was signed between the Netherlands and Belgium that year and renegotiated in 1846 and 1851; there were rumours that the Dutch government did not actively negotiate with Belgium, and that Belgium sought individual agreements favouring its own interests instead of national agreements, as mentioned by the fishers.²⁰⁸



Nevertheless, fishing business had difficulties changing production methods as a means of adopting to change in demand; instead they must, on the short term, adapt prices, or on the long term resign from business.²⁰⁹ The Dutch ship owners invested their money elsewhere in correspondence with their traditional business structure or they became insolvent.²¹⁰ On top of this, several years' disastrous yield of potato affected the marketing possibilities of salted cod, as this was traditionally eaten with potatoes in the Netherlands. The complementarities of the produce seemed a surprise to the ship owners, who usually

²⁰⁷ Nationaal Archief 3.11.05 inv.34 p. 936-944, inv.36 p.1003-1004 "eene brochure gesteld en aan alle de leden van het gouvernement medegedeeld betogende de "belangrijkheid deezer zeevisscherijen en de veelvoudigen invloed die dezelve op de nationale bedrijvigheid uitoefenen" "

²⁰⁸ Wintle Michael; *An Economic and Social History of the Netherlands*; p.147-153 and Kossmann E. H.; *The Low Countries 1780-1940*; p.201-202

²⁰⁹ Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.20

²¹⁰ Nationaal Archief 3.11.05 inv.34 p. 936-944 and see Buisman H; *De Vlaardingse Koopvaardij in de tweede helft van de negentiende eeuw*; doctoraalscriptie, Rijksuniversiteit Leiden, dec. 1982

spoke of the market value rather than the utility value of their catch.²¹¹ What was happening was that the Dutch were no longer self-sufficient food suppliers in spite of a thriving agricultural sector. From the beginning of the 1800s, import of food was required while goods for export were lacking in return; general goods like salted cod were not sought after anymore. This dilemma concerned the ship owners, who on top of the difficulties adjusting to new values must explore new markets by means of transport not yet provided for in the Netherlands by the middle of the 1800s.²¹² King Willem II inherited an indebted country from his father in 1840, and a country where he could not reign independently from the government, like his father. Any valid law must now have the signature of a minister as well as the king.

Liberalising Dutch cod fishing

Revision of regulations on North Sea cod fishing

The new colonial politics in the 1830s initiated refining industries in the Netherlands to process the primary resources coming from the East Indies such as sugar, coffee and tobacco. In the 1840s, prices dropped and affected both the industries, the *Nederlandse Handels Maatschappij* trading and transporting the goods, and the Dutch economy depending on the colonial income. Because of the king's and the colonial ministry's faulty reports on revenue in the 1830s, estimates were overstated in the 1840s and an economic crisis arose. The government initiated cutback in the national expenses in 1843 by rescheduling the national deficit. Hereby, the state stopped Dutch *rentiers* from profiting from a high rent on the national debt. It also started a clear-out of the multiple species of coins floating.²¹³ Then the government reconsidered any agreements made by Willem I on different trades, including asking the members of the *Kollegie van de Ijslandse Kabeljaauwvisserij* to revise their own work within the *Kollegie*, and apply regulations to it, which had never existed. This initiated a debate on the purpose of the *Kollegie* and the means and ways of serving it, which was presumably the intention of the government to begin with. On 2 May 1846, the member from Zwartewaal Mr. A. Kwak, composing the new regulations in cooperation with the remaining *Kollegie*, sent the final version to the

²¹¹ Nationaal Archief 3.11.05 inv.2 p.158,188-189 (1845-47)

²¹² Meere J.M.M. de; *Economische ontwikkeling en levensstandaard in Nederland gedurende de eerste helft van de negentiende eeuw, Aspecten en trends*; 's Gravenhage 1982 - Meere did not know of the sources on fishing used in this thesis and thereby under estimates Dutch fishing, see p.19-20

²¹³ Zanden van, Riel van; *The Strictures of Inheritance*; p.170-180,211-212 and Kossmann E. H.; *The Low Countries 1780-1940*; p.265-266 (many ship owners were *rentiers* as well)

minister of the interior.²¹⁴ By then, the debate included the number of members stated in the regulations' article one. The issue at stake was if the members from Pernis, Zwartewaal, and Middelharnis were worthy members, referring to the dispute about landing fresh or salted cod on the one hand, and safeguarding the means of survival to marginal producers on the other hand. In the end they were all included, while the members cancelled article four because they did not all agree to any other towns obtaining membership of the committee, even if being homeport of vessels fishing near Iceland or in the North Sea for three successive years.²¹⁵ When presenting the regulations, the cod fishing business asserted its traditional factor market, struggling to survive at the market clearing equilibrium, having long lost its supernormal profit.²¹⁶ By cancelling article four, the *Kollegie van Ijslandse Kabeljaauwvisserij* refused taking responsibility. This eased the government's decision on future politics.

Competition from former colleagues

Changes began in 1846, when a treaty was signed allowing the Dutch fishers an export of 976 tons of salted cod per year at a fixed tax of 10 franc per ton.²¹⁷ In 1847, the tax became part of commercial negotiations, not yet satisfying the ship owners. Now they must fiddle their catch records for Belgium, causing problems with the Dutch authorities.²¹⁸ Until its independence, "Belgian" consumers willingly paid the price for the high quality Dutch salted cod. After its independence and the introduction of quota and import tax, the Belgian consumers' need for Dutch cod slowly declined. Their national equivalent met their demands, and the Dutch knew no competitive strategies to apply. Unfortunately, the common person in Belgium thereby lost her option, as the price on plain food, such as salted cod, was kept artificially high while protecting a national business. A member of parliament in Brussels used this as an argument for introducing free import of salted cod, but no one seemed to pay attention. The quota and tax not only protected the Belgian fishing business against foreign competition it also formed a national solidarity with the fishers, and their expensive produce.²¹⁹ King Willem II sought a different solidarity in the Netherlands to ease tensions after the economic crisis and revolutions in France and Germany in Spring 1848. The liberal politician Thorbecke made a revision of the constitution, matching the territorial and administrative outline of the country that the king

²¹⁴ For a translation of the regulation *Huishoudelijke Bepaling voor de Gekommitteerden tot de Ijslandsche en Kabeljaauw-Visserijen in de Provincie Zuidholland* see Appendix 13 note 214 and note 560 and note 563

²¹⁵ Nationaal Archief 3.11.05 inv.31 p.875, inv.32 p.893-896, inv.34 p.949-968

²¹⁶ Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.5

²¹⁷ Nationaal Archief 3.11.05 inv.35 p.979, inv.36 p.1015

²¹⁸ Nationaal Archief 3.11.05 inv.2 p.185-94, inv.36 p.1024

²¹⁹ Nationaal Archief 3.11.05 inv.27 p.837-838, inv.34 p.936-944, inv.36 p.1023 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.14

and parliament accepted. Then the Dutch formally became a country of its own, a parliamentary democracy not risking independent rule by the king in the future; the institutions worked within a new framework.²²⁰

The disestablishment of the *Kollegien* and the end of financial support

In 1850, a liberal minister asked the *Kollegie* for its opinion on negotiating with Belgium. The *Kollegie* much desired a free market, and the member from Middelharnis, Mr. P. L. Slis, preferred a price on fresh fish determined by the market, replacing a price fixed by law, but they were all disappointed.²²¹ When negotiating with the Dutch in 1851 the Belgians kept the tax at 10 franc per ton, raising the quota per year to 2500 tons.²²² The hope of the ship owners was frustrated when the minister of the interior in the Netherlands began negotiating with the state department of Southern Holland on the regulations of Dutch fishing business. He involved all the existing fishing *Kollegien* asking their advice on the need, and use of the king's support to the fishing industry and to industries not receiving the support. The initiative was part of a cutback in the "*Landsmiddelen*", and a consequence of the Netherlands now being a full parliamentary democracy.²²³ The support had become automatic, and a phase out over the next three years became the consequence, as the king's original industrial policy had failed.²²⁴ The *Kollegie* had a hard time accepting the decision. Many of them lived their lives, fishing for cod at sea, while the fishing industry proclaimed a reduction by the French war and occupation, and the king helping the business recover by granting his support. This did not happen; instead, it suffered difficulties in marketing, and a prolongation of the support. Now, the negotiations revealed structural problems in cod fishing business like a low standard of education, lack of development in fishing, and incompatibility in domestic and foreign trade. The government suggested cooperation with the national chamber of commerce; then all laws regarding cod fishery were cancelled and the *Kollegien* disestablished.²²⁵ Fighting to preserve status quo, the *Kollegie* members presented their predictions for the future to the government, revealing aspects of fishing business, not mentioned otherwise. First they emphasized the importance of fishing to the local communities securing employment and survival of complementary businesses as they had done before. Then they frankly exposed their situation as ship owners by mentioning the coincidence of higher income

²²⁰ Zanden van, Riel van; *The Strictures of Inheritance*; p.173-175 and North; *Institutions*; 1990

²²¹ Nationaal Archief 3.11.05 inv.36 p.1020-1022, 1024-1025, inv.37 p.1047-1049

²²² Nationaal Archief 3.11.05 inv.37 p.1059-1061, 1064-1067

²²³ Nationaal Archief 3.11.05 inv.2 p.219-226, inv.36 p.993-996

²²⁴ Nationaal Archief 3.11.05 inv.36 p.1007-1014, and "Besluit van 30.09.1827 nb.27" and "Besluit van 15.01.1850 nb.82" inv.37 p.1037-1040 and reports by 27.01.1851 nb.254 and 24.02.1851 nb.95 from the ministry of interior affairs, p.1050-1055, inv.38 p.1073-1080, inv.39 p.1099-1100 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.22

²²⁵ Nationaal Archief 3.11.05 inv.2 p.239-45, 268-274

taxes, hardly any relief on export conditions, the entry of smaller vessels into cod fishing business, cession from investments and age. The *Kollegie* members guarded their capital fearing the government removed the support saying that the diligence of the people had disappeared. They fought to survive, only the support and the revenue from herring fishery kept them from resigning. Because some laws on fishing were now void, vessels started fishing as they pleased, and some were even preparing for cod fishery this coming winter that had never fished for cod before. A commandant from a patrolling vessel as well as the present *Kollegie* found this alarming. The *Kollegie* was aware; it had had its day, as no one would engage in an association from which he had no profit.²²⁶ Cod fishing business was on the threshold to a new world, although it might not appreciate the possibilities at the time.

The introduction of liberalisation and freedom of the individual fisher

In addition, the *Kollegie* was ahead of its colleagues. Only in 1854, the government appointed a commission investigating a cancellation of the laws on herring and coastal fishery and its consequences.²²⁷ The commission's report to the king was based on documents and conversations with experts in all respects: scientists, tradesmen, fishers, ship owners and a naval officer.²²⁸ The report only treated the cod fishery by saying the summer cod fishery was self-supportive and the catch near Iceland was high, and so was the French and Belgian import tax. It referred to the Scottish cod fishery, which the British government supported until 1830. For some years, the Scottish cod fishery diminished, then it revitalised and in 1852, it had grown to the size of the sum of the British and the Irish cod fishery, the commission said.²²⁹ Primarily, the commission indicated the free market was worth aiming at. They made an outline of the most successful fisheries in the Netherlands at the time, and the winner was the Zuiderzee fisheries, which had never received any financial support.²³⁰ Furthermore, what was presented as a victory to the small town fishers in one respect the commission now presented a defeat. As mentioned, in 1825, the *Kollegie van de Ijslandse Kabeljaauwvisserij* fought for recognition of and support to the Middelharnis ship owners as participants in the coastal fishery. By doing so, the commission said, this particular branch of fishing evolved from being a small but

²²⁶ Nationaal Archief 3.11.05 inv.36 p.997-1002, 1005-1006, inv.38 p.1090-1094, inv.39 p.1101-1102 and North; *Institutions*; chap.5 on informal constraints

²²⁷ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.3

²²⁸ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.4-5, enclosure nb.1

²²⁹ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.40-42

²³⁰ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.47

independent business to becoming a big and dependant business. The commission claimed, many people would now suffer, as the royal support ceased, because the Middelharnis fishery could no longer sustain itself. Consequently, the commission accused the government of killing fishing business, rather than keeping it alive.²³¹ Emphasizing its argument, the commission made a comparison between two towns: Monnickendam with fishing in the Zuiderzee and Vlaardingen with fishing in the North Sea. Monnickendam, they said never received any support and had no privileges, but its market for fish and its fishing was thriving. On the contrary, the herring fishery at Vlaardingen declined, while receiving royal support. The ship owners were privileged, yet the fish market was not recommendable.²³² The commission showed that the remaining branches in the Dutch fishing business received support not in the young and thriving time of fishing history, but during the mature and declining part, and this only prolonged the decline artificially. In this respect, cod fishery already realized and acted accordingly, while most people consulted by the commission talked about the support, and made it an issue of concern nevertheless.²³³ Particularly in the Holland province came reactions towards the new liberal government and its initiatives from conservatives, who preferred the status quo. Although there existed no political parties in the Netherlands, politicians by either liberal or conservative convictions took turns in office until the 1890s when socialists won their first election in the Netherlands.²³⁴ The Dutch did not need to familiarize themselves with new democratic institutions, like other European countries in the mid-1800s. Rather, it was a time of adjusting the well-known Dutch business acumen from the mercantilist to the capitalist approach – and still doing good business.

Dutch fishery must act like any other business

Survival of the fish stock in the sea bordering the Netherlands was part of the concern and debates over the potential consequences. The commission regarded the sea a source of national wealth, inexhaustible provided it was treated carefully. If today's fishers caught only the interest of its principal, this could be left for future generations, like their forefathers left it for today's fishers.²³⁵ From conversations with scientists, the commission

²³¹ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.163-165. The question is, if similar situations might occur on the free market or this is simply an ideological debate? Ginkel Rob van; Elk vist op zijn tijd, Een historisch-antropologische studie van een Zeeuwse maritieme gemeenschap Yerseke 1870-1914; p.39-68, Universiteit van Amsterdam, Walburg Press 1991

²³² Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.210

²³³ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.155-161, enclosure nb.1

²³⁴ Kossmann E. H.; The Low Countries 1780-1940; p.272-280

²³⁵ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.134

was aware fish spawn near the coast during winter months and become vulnerable to certain fishing gear used by coastal fishers (*schrobnet* and *cordenet*). Not only did they catch adult fish spawning and thereby reduced the likelihood of reproduction, they also messed up the seabed by drawing the nets along, disturbing the habitat of the fish.²³⁶ Winter cod fishery (*beugvisserij*) and *hoekwant* fishery using long line and bait did not have this effect on the fish stock. Much discussion took place for or against continuing prohibiting *schrobnet* fishery near the coast during winter months, protecting the fish stock.²³⁷ In the end, the commission's recommendation to the king included a prohibition. It also included absolute freedom to all fisheries on certain conditions.²³⁸ First, Dutch fishery must act like any other business for the produce to succeed on the free market. They must check prices and consider if production costs were covered. In addition, the ship owners must pay attention to consumer needs. Now, the reverse was the case, according to the commission. The Dutch fishing business defended its own monopoly and its own taxation on foreign goods, while cursing other countries' equivalent.²³⁹ While suggesting the king a cancellation of all laws on herring and coastal fishery, the commission proposed a new advisory committee covering all branches and interests in fishing business, including cod fishery. Its tasks were to manage the ship owners' compliance with any judicial prescriptions, constantly examine the fishery and assist when needed, collect and disseminate knowledge about the profession including news from abroad, and provide a yearly report to the king.²⁴⁰ All ship owners, fishers, tradesmen and the naval officer reacted negatively on the commission's proposition and liberalisation of Dutch herring and coastal fishery.²⁴¹ This in spite of the fact that no one regarded their present situation acceptable or agreeable. Only one person was capable of providing a positive prospect: Mr. P. L. Slis from Middelharnis. He was aware the Belgian import tax was reduced on produce up the river Schelde for Ostende "*invoer langs dien weg*", and he was convinced this would be the case on the coming railroad from Rotterdam to Antwerpen as well. He was confident this would soon facilitate exporting fresh fish to foreign destinations, further up river and inland. This he said knowing the successful

²³⁶ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.134-146

²³⁷ Almost all the experts were asked for their opinion on a prohibition against *schrobnet* fishery during winter months, and the majority agreed to it. Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; enclosure nb.1, i.e. p.87 on long line

²³⁸ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.220-224

²³⁹ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.203-207

²⁴⁰ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; p.168-69, 172-175, 220-227

²⁴¹ Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; enclosure nb.1

fishers and colleagues in Middelharnis faced severe problems as the support ceased. It seemed he - along with the commission – shared the goal of production: satisfying human needs, making business inside as well as outside the usual networks.²⁴²

Adjusting to liberalisation

The *College* taking over from the *Kollegien*

Three years later, on 15 December 1857, the new advisory committee (*College*) held its first meeting. The *College* consisted of nine members from throughout the country, representing different branches of fishing business. Forming smaller committees within the *College*, they held meetings at close hand on specific issues, and each year in May, the *College* published an annual report. The first report more or less met the criteria set by the commission of 1854, providing advice for the fishers, telling about new activities in fishing business, commenting on statistical fishing data.²⁴³ Transmitting information and advice on foreign issues caused problems so the *College* asked the government for financial support, establishing contact to the Dutch consul in Yarmouth and the British Board of Fisheries in Edinburgh. Asking the consul in Denmark for advice was unsuccessful as the consul considered the Danish fishery of little interest to the *College*.²⁴⁴ This did not prevent the *College* from mentioning the episode in its annual report, nor from acquiring literature and ship models from the Danish fishing museum for the fishing exhibition held in Amsterdam in 1860. By explaining such professional disagreements in the annual report, stressing its own transmitting role, the *College* introduced an important professional approach to working.²⁴⁵ By overcoming its own ignorance, the *College* set an example for the ship owners who were now on their own having no laws and regulations to abide by. They also left the ship owners in a time where the state lacked money for the crucial infrastructure and investments helping the fishers among others finding a market for the fish or the produce. Parliament was busy reorganizing the structure of society according to liberal ideas, yet lifting the burden of rules and regulations did not instantly bring success and prosperity into cod fishing or the country as a whole.

²⁴² Verslag over de Zeevisscherijen uitgebragt door de Commission benoemd bij koninklijk besluit van den 9den februarij 1854 nr.57; enclosure nb.1 p.84-89 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.3 and North; *Institutions*; chap.7

²⁴³ Verslag omtrent den Staat der Zeevisscherijen in 1857 uitgebragt aan den Minister van Binnenlandsche Zaken; p.1-5 see Appendix 14 note 243 on the instructions of the College

²⁴⁴ Aan den Minister van Binnenlandsche Zaken (1858); p.21 and Verslag omtrent den Staat der Zeevisscherijen in 1859; p.33-35

²⁴⁵ Bijdragen en mededeelingen voor de statistiek van het koninkrijk der Nederlanden nr.2, Verslag van den staat der Zeevisscherijen in 1860; p.38-39

Fishers's choice was the ideological argument hiding authorities' manipulating decision

While administrative and legal circumstances changed, vessels went off fishing as usual. Some went for cod in the North Sea using hooks and long line, others stayed near the coast using *schrobnets*.²⁴⁶ Indirect economic instruments such as meeting criteria to tax exemption on salt for cod still provided limits to freedom from legislation.²⁴⁷ The inspectors exempted only vessels with a crew of five or more fishing for herring or cod in the North Sea and near Iceland. Before leaving and immediately at arrival from each fishing trip, the captain must report his own name, the name and the type of vessel, the kind of fishing done and the fishing ground reached, the port of departure and arrival, and the last and first signpost to be passed when leaving for sea. The captain must receive recognition of his report and its correspondence with reality being a Dutch fishing vessel before even setting off fishing and obtaining the tax reduction on salt. Additionally, the barrels containing salt must be plumbed, stored in authorized storehouses before use, and finally, in case the vessel did not land the salted fish at the port promised in the report it lost its tax reduction on salt, applied for to begin with. The ship owners had different options. They might buy salt and continue salting their cod, performing all the required, time-consuming formalities. They might buy salt and continue salting their cod without performing the required formalities and thereby having to pay tax. Alternatively, they might stop salting their cod. Considering the parliament's predilection for the English fishing politics, choice was the ideological argument hiding a manipulating decision of tax reduction on salt, encouraging the ship owners and fishers to aim at low cost modern fishing technology.²⁴⁸ Coastal cod fishing using vessel with a crew of five or less was excluded anyway.

The bait debate

The accessibility and expense of bait and salt was still a recurrent concern to the cod fisheries, yet the unaccustomed new free situation bothered the ship owners engaging in *beugvisserij*. Traditionally, *prikken* or Lamprey were caught up the rivers Maas, Waal or Rhine being kept fresh in the bun basin onboard the vessels. In case supplies of the Lamprey were limited, alternatives existed, though they did not necessarily stay fresh for long nor supply at the time required by the fishers. Catching *geep* or garfish along the coast near the island, Texel became a popular alternative, also among foreigners, and salting the garfish overcame the freshness problem. Seasonal Lamprey fishery no longer restricted the ship owner; instead, *beugvisserij* being optional at any time of the year,

²⁴⁶ Verslag omtrent den staat van de zeevisscherijen in 1861; p.14-15

²⁴⁷ Nationaal Archief 3.11.04 inv.122, law of 11.12.1857 no.123 and decision of 11.12.1857 no.124 and Anthony Charles; *Sustainable Fishery Systems*; chap.5

²⁴⁸ North; *Institutions*; chap.6

demand for garfish rose.²⁴⁹ In 1860, the *College* asked the government for tax relief on salt used for garfish; fearing the Dutch ship owners would seek bait elsewhere, in the neighbouring countries. Continual complaints made the government cut the tax on salt for baits in 1864. This did not simply cut ship owners' production costs, though. Entrepreneurs appeared, buying cheaper garfish, selling them as bait to foreigners keeping the difference themselves.²⁵⁰ This was not the idea of the *College*'s enquiry, but they left the free market regulating demand and supply. Consequently, fishing business grew quicker than the supply of bait could keep up with. Prices increased and fluctuated, depending on circumstances, causing much concern and unintentional lull in production because of lack of bait.²⁵¹ The small group of fishmongers selling bait, capitalizing on their oligarchic position, caused concern to a degree that the ship owner A. E. Maas from Scheveningen initiated a report on its consequences.²⁵² Some ship owners asked for permission to fish for Lamprey from October onwards instead of November, but the proposition was rejected.²⁵³ Some started substituting one variable factor of production: *schrobnets* for another: *beuglines*, as they could no longer afford bait and salt; facing a similar dilemma, but at a bigger scale, as the colleagues in previous generations: using *beuglines* or *schrobnets* on the one hand and safeguarding the means of survival to marginal producers on the other hand.²⁵⁴ Some went fishing for herring as bait; some went to England for sardines. Fishing for herring as bait seemed a sign of desperation keeping *beugvisserij* alive, recalling the French occupation when abandoning fishing at sea.²⁵⁵ The *College* was aware part of the problem was due to the seasonal availability of bait in Spring not corresponding well with the demand preferably in autumn and winter. Asking their neighbouring countries how to solve the problem, the *College* received several explanatory responses but no path-breaking solutions.²⁵⁶ If the English used juvenile fish caught

²⁴⁹ Verslag van den staat der Zeevisscherijen in 1860; p.58-59 and Verslag omtrent den staat van de zeevisscherijen in 1861; p.40 and Verslag omtrent den toestand van den zeevisscherijen in 1865; p.12 and Verslag van den Staat der Nederlandsche Zeevisscherijen over 1879; p.73

²⁵⁰ Verslag van den staat der Zeevisscherijen in 1860; p.17-20 and Verslag omtrent den staat van de zeevisscherijen in 1862; p.8-10 and 1863; p.9-11,42 and Verslag omtrent den staat der zeevisscherijen over 1864; p.11,32 and Verslag van den Staat der Nederlandsche Zeevisscherijen over 1869; p.16-17 and 1870; p.10 and 1874; p.9-10

²⁵¹ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.40 and 1866; p.45 and Verslag van den staat der Nederlandsche zeevisscherijen over 1867; p.37,42 and 1868; p.67 and 1873; p.41 and 1874; p.52 and 1875; p.53 and 1876; p.54 and 1877; p.23,63 and 1881; p.17,104 and 1882; p.80,82

²⁵² Verslag van den staat der Nederlandsche Zeevisscherijen over 1869; p.43 and 1870; p.42,48

²⁵³ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1874; p.13-15

²⁵⁴ Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.4 and Verslag van den Staat der Nederlandsche Zeevisscherijen over 1871; p.43 and 1872; p.41

²⁵⁵ Verslag van den Staat der Nederlandsche Zeevisscherijen 1881; p.97 and 1875; p.58

²⁵⁶ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1875; p.15-18 and Bly; *Verklarende Vakwoordenlijst*; says that apart from the above-mentioned bait, including whitebaits, the fishers used mackerel as bait.

trawling in 1875, they did not report this, naming their bait “whitebait” instead.²⁵⁷ In 1877 and 1878, the Dutch government released tax on salt for sardines, and legitimized the returning of non used salt, while maintaining tax on salt for big fish (cod) caught using hook and line.²⁵⁸

Colonial politics and liberalism

The concern about the bait was maybe exaggerated somewhat because of the continuous economic crisis in the Netherlands beginning in the 1840s and lasting into the 1860s. While the cod fishers among others had to adjust to liberal politics in the Netherlands, aborigine [now Indonesian] people adjusted to new politics in the Dutch colonies. The Culture-system from the 1840s supplying king Willem I with money for *het Amortisatie-Syndicaat* and *het Fond ter Aanmoediging van de Nationale Nijverheid*, supporting fishing business financially during the first half of the century, was ripe for liberalisation. Though the two funds closed as the king abdicated in 1840, the Culture-system continued in the colonies. The Dutch had refrained from any ruling in the colonies, leaving it to the local people, but by the 1860s, they decided to sell the majority of their “national” plantations, imposing income tax on the inhabitants and expropriating wasteland or common land from the aborigines to any potential buyer. These dispositions caused much political debate in the Netherlands and interruption within the colony, privatisation being foreign to its culture. An issue of concern to the Dutch slowing down the process was the need for means for financing new infrastructure of railways and canals in the Netherlands, but war in the East Indian colony forced the politicians to take action. By the 1880s, the war caused a deficit overshadowing the estimated profits of the market economy of the colony.²⁵⁹

Problems attracting the right workforce for the fishing fleet

At home, the Dutch admired the progress made by the English in fishing business on the one hand, but on the other hand, they rejected the English ways of large-scale production, the means of employment in particular the employees’ long and hard working hours. Child labour did occur in the Netherlands, even on the fishing vessels, but it was different to the English.²⁶⁰ Being a labour intensive business, cod fishery protected its well-qualified fishers from seeking employment elsewhere, minimizing production costs by looking for alternatives to the working capacity. In the early 1860’s, a growing number of vessels went

²⁵⁷ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1880; p.29

²⁵⁸ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1878; p.8-10

²⁵⁹ Kossmann E. H.; *The Low Countries 1780-1940*; p.270-273, and Moor Tine de; *Avoiding tragedies: a Flemish common and its commoners under the pressure of social and economic change during the eighteenth century*; *Economic History Review*; 2009, vol.62, no.1, p.1-22

²⁶⁰ Zanden Jan Luiten van, Riel Arthur van; *The Strictures of Inheritance*; on child labour, See **Dutch cod fishers in the 1800s** on fishermen’s education

fishing because foreign import taxes diminished and prices on cod rose. A continuous growth in number of vessels was not followed by an equally large number of well-qualified local fishers, causing structural problems. Eventually some fishers deserted fishing vessels when at port, unloading the catch, forcing ship owners to ask for legal assistance at the *College*. There were several reasons for an insufficient workforce. The cod fishers's wages were calculated as a result of their catch. Rising prices on cod made the Dutch fishers better off than workers in general in the Netherlands, and when convenient some fishers simply left the vessel for days or more, not caring about their contractual obligations.²⁶¹ In particular, at times lacking bait, vessels stayed in port awaiting supply, subsequent revenue from fishing no longer acted as incentive for the fishers. Enforcing the existing law on shipping-crew implied certain difficulties; instead, the *College* initiated a study on desertion affecting shipping, fishing and the legislative power.²⁶² The *College* did not blame the fishers who were just profiting from favourable conditions. Rather, the *Collegie* criticized the shipowners for indirectly making way for the desertion themselves, irrespective of any contractual agreements but their own, when protecting their crew and paying well-qualified fishers to quit one vessel and join their own. The ship owners even let the fishers keep fresh fish to eat or sell, evading the fishmongers.²⁶³ Onboard the fishing vessel all men had certain duties, being interdependent, so reliable fishers were unable to work when the crew was not full, or not equally good at fishing; they thereby discredited the traditional reputation of Dutch fishers as well as the competitive capacity of their produce.²⁶⁴ Other reasons for the insufficient workforce might be lack of recruits because of a decrease in population until 1870 caused by poor nutrition, poor hygiene, and diseases. Shortage of fishers also resulted from competition from new businesses by land and a growing and more modern shipping fleet providing a year long, physically less demanding employment. The rising wages in the 1860s was the beginning of a national change in several branches in the country. Workers could afford more and better food, and in line with urbanization, their housing and environment improved, and thereby their hygiene and health.²⁶⁵

Working conditions in Dutch fishing

²⁶¹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1869; 48 and 1870; p.15-16 and 1876; p.55-56 and 1877; p.23 and 1879; p.59,78 and 1881; p.103 and 1882; p.80 and Heijer Henk den; Scheveninger Haringvisserij, Een geschiedenis van de Scheveningse haringvisserij tot aan de tweede Wereldoorlog; Scheveningen

²⁶² Verslag van den Staat der Nederlandsche Zeevisscherijen over 1876; p.14-15,54 and 1877; p.33-36 and 1878; p.15-17 and 1881; p.31-and Staatsblad nr.32 07.05.1856

²⁶³ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1880; p.30-35

²⁶⁴ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1877; p.15 and 1878; p.14

²⁶⁵ Wintle Michael; An Economic and Social History of the Netherlands; p.7-39

Elsewhere in Europe, workers united in trade unions, asking for better working conditions. In the Netherlands, the church traditionally played a social role in society, and combined with an overall small scale business structure, Dutch workers did not organize until around 1900.²⁶⁶ The *College* feared the future of the fishing business nevertheless, urging the government to take action. In summer 1881, a law was especially designed for the Dutch fishery: it made clear that the ship owners must provide a well-equipped and well-kept vessel ready for up-to-date fishing, treating the fishers decently.²⁶⁷ In return, the fishers must commit to all duties connected with fishing including loading and unloading, equipping the vessel and continuous upkeep. Drunkenness or smuggling was forbidden. If not meeting their obligations the fishers might be dismissed, yet receiving their pay; the captain receiving a compensation if dismissed. The 1880s witnessed a rising interest in working and living conditions of the fishers on board the vessels. The law provided a pay determination for *schrobnets* fishery only, presumably because of the increasing use at sea, maybe indicating a possible calculation of the marginal revenue product of labour, reacting accordingly. According to the law, the fishers fishing with *schrobnets* received twenty percent of the gross price achieved from the catch. Then twelve percent out of the remaining eighty percent covered any expenses onboard, damage or loss. The remaining sixty eight percent was distributed among the crew and the ship owner so that the ship owner received two parts, the captain one and a half part and the fishers shared the rest.²⁶⁸ One year later, the threat of being registered at the police stations nationwide reduced the number of desertions or breaches of contract, and the following year it converted a bribe for signing on a vessel mid-season into King's shilling when signing a proper contract.²⁶⁹ In 1885, ship owners from Scheveningen asked the *College* for an addendum to the law, commanding fishers to stay fishing during winter, alternatively working at any sideline of the ship owners' such as shipbuilding yards.²⁷⁰ Scheveningen was the town still struggling with desertion and breaches of contract. Dutch cod fishing adjusted to the liberal freedom of when and where to fish in the North Sea at a steady pace. Shifting from wooden to steel vessels and from sail to steam vessels caused more concern.

The importance of being honest and conscientious – and social

²⁶⁶ Heijer Henk den; *Scheveninger Haringvisserij*;

²⁶⁷ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1881; p.31-35 and Staatsblad nr.98 28.06.1881 and Zanden Jan Luiten van, Riel Arthur van; *The Strictures of Inheritance*; on business structure

²⁶⁸ Verslag van den Staat der Nederlandsche Zeevisscherijen, 1881 p.32-35 and Law of 28.06.1881 no.98 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.4,11

²⁶⁹ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1882; p.29-30 and 1883; p.35-36 and 1884; p.37

²⁷⁰ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1885; p.63-65

Since the years of negotiations in the 1850s, between the *Kollegie* and the minister of the interior, ship owners must adjust to the free environment. In 1858, the *College* wrote in its annual report about the importance of being honest and conscientious when working, fearing occasional misuse of the freedom to act independently.²⁷¹ By 1863 ship owners sold cheap foreign herring as Dutch profiting by abusing the old time reputation of Dutch herring, confirming the fear of dishonesty.²⁷² The fishers fishing for bait did not convert the tax reduction on salt for baits into a price reduction on baits to the fishers fishing for cod, but into a bigger revenue for themselves by selling the salted baits expensively to foreigners. This was not being dishonest; what was unusual to the ship owners was that it was being anti-social.²⁷³ Traditionally, ship owners shared parts in their vessel financially with relatives, skipper and maybe local business connections equipping the vessel. At the end of the year when the fishers had their wages and expenses were paid, part holders got their share according to the size of their part, that is the amount of money they invested in the vessel and fishing gear. Private limited companies were rare in the Netherlands during the first half of the 1800s. This was for a long time considered to be due to slow financial and industrial progress in the country; now it is recognized that it was due to the decision of king Willem I that obtaining a permission for a limited company required his signature and a position for him on the board of the company. These criteria put restraints on many enterprising people including ship owners maintaining the family business structure and shared parts in i.e. fishing vessels. An unsuccessful attempt was made in 1838 to lift the king's decision.²⁷⁴ After the liberalisation, in 1865, encouragement came from foreign countries on arranging fishing vessels in private limited companies, making shares available to a broader group of people not necessarily engaged in fishing business themselves, but keen on making investments. The *College* expressed wishes for the Dutch fishing business to rise to the occasion, yet it did not explain why the private limited companies were preferable to the family business.

The fish market, one price bidden for one cod representing the whole lot

Some small family businesses converted into limited companies following the lifting of the king's law.²⁷⁵ In some respects, it seemed the ship owners hardly changed their fishing methods during the century. In other respects, they cut down on expenses as advocated by the *College*. The ship owners realized they got the best price by landing their catch in the closest foreign port to its destination, leaving the local national fishmongers

²⁷¹ Aan den Minister van Binnenlandsche zaken (1858); p.64

²⁷² Verslag omtrent den staat van de zeevisscherijen in 1863; p.6

²⁷³ Verslag omtrent den staat der zeevisscherijen over 1864; p.11

²⁷⁴ Zanden Jan Luiten van, Riel Arthur van; *The Strictures of Inheritance*; p.160-162

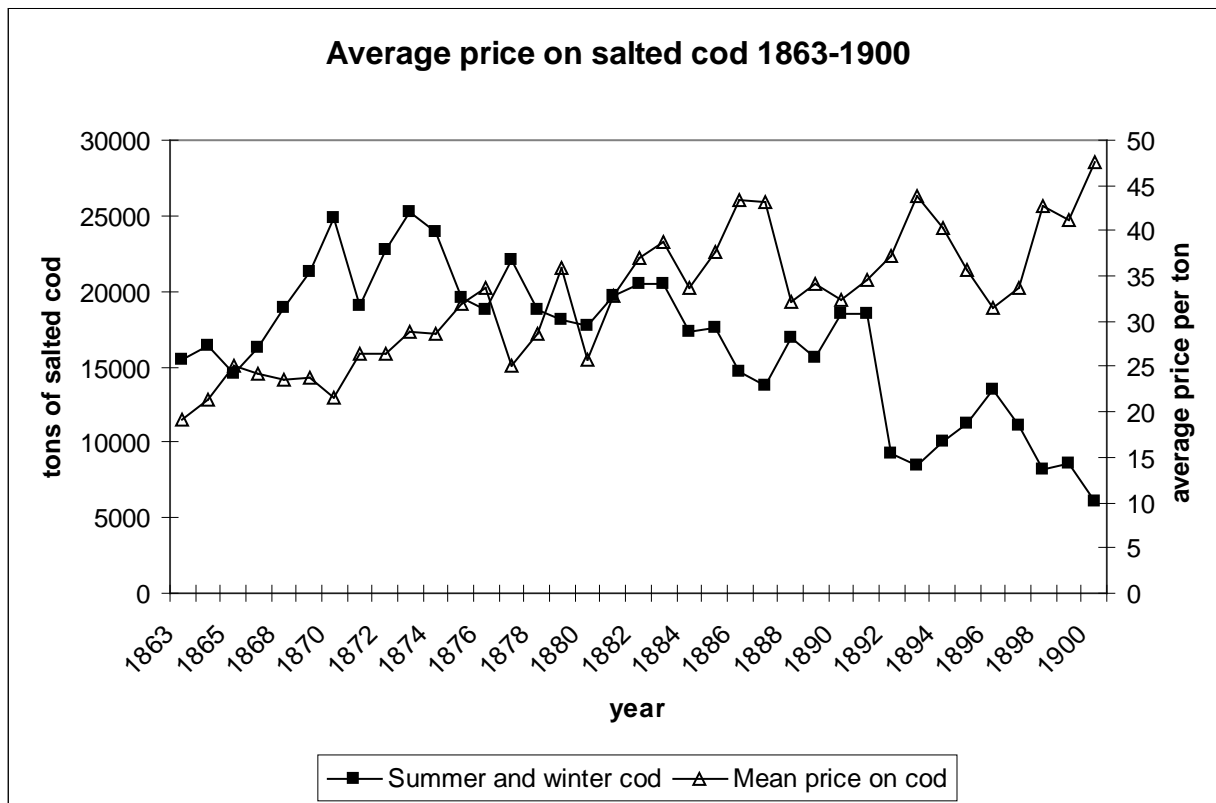
²⁷⁵ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.15-17 and Verslag van den staat der Nederlandsche zeevisscherijen over 1867; p.15-16 and 1875; p.15

transient.²⁷⁶ The ship owners depended on the railroads transporting the fish inland. Competition between railway companies had an influence on fares focusing on large quantities of fish at a time, encouraging a bigger supply and thereby a bigger catch.²⁷⁷ Some ship owners complained they could not keep track of the trade anymore, the number of store houses in the big ports being overwhelming, they would rather land their catch in smaller ports lacking direct railway connections to foreign markets.²⁷⁸ Some decisions on how to handle the freedom were up to the ship owner himself, other decisions were imposed on him by external circumstances. In 1876, the *College* made the decision to start an investigation into the operation of the fish markets and five years later results were presented: the biggest difficulty to overcome was the tradition of selling fish in lots or consignment based on one price bidden for one cod representing the whole lot. If most of the lot was smaller than the representative cod, two divided the price bidden, if they were bigger, two multiplied it. If other fish among the lot, certain conversions existed: two ling to a cod and one halibut to two cod, and for twenty cod sold, one was added free, and any dead fish landed was a makeweight. These “rules” were agreed to by the local ship owners and almost incomprehensible to foreigners who tended not to return after their first visit. The *College* regarded this a bad sign asking for a change, but having no proposition for renewal it had no impact on the existing freedom of the ship owners.

²⁷⁶ Verslag van den staat der Nederlandsche zeevisscherijen over 1874; p.11

²⁷⁷ Verslag van den staat der Nederlandsche zeevisscherijen over 1879; p.14

²⁷⁸ Verslag van den staat der Nederlandsche zeevisscherijen over 1880; p.26



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It is amazing the catch started declining at the beginning of the 1880s and dropped remarkably at the beginning of the 1890s, while prices rose.

Profiting from liberalisation

Freedom was not always what it seemed to be

The freedom of liberalism allowed ship owners to do what they wanted, and they wanted to make the most of fishing; yet freedom was not always what it seemed to be. Ship owners reducing working capacity faced hard times, realizing the inapplicability of new technology if not approved by the fishers.²⁸⁰ Common knowledge said that engaging vessels in different types of fishing during the year meant subordinating one to the other, as the fishers were not equally good at both, and because herring fishery in most cases was superior to cod fishery, *beugvisserij* in winter suffered. Expressing its satisfaction with introducing fishing inspectors in 1857, who soon reported a need for development, the *College* introduced a technically qualified member in the *College* to fully support the

²⁷⁹ *Verslag van den staat der Nederlandsche zeevisscherijen over 1881*; p.23-26,103 and Kuiper Marco; *Vissers en Ventjagers*; p.21-25 and *Verslag van den staat der Nederlandsche zeevisscherijen over 1863-1906* for the graph on the correlation between price, catch and vessel

²⁸⁰ *Verslag omtrent den toestand van den zeevisscherijen in 1865*; p.12

progress.²⁸¹ The first example of new technology was the introduction of cotton nets.²⁸² It was a combined cotton/flax net treated with tar. The English and the French had already used the gear for years, and by 1859, many Dutch ship owners demanding the new nets were able to use more and bigger nets: 300 meshes instead of 200. Succeeding the nets came reefs of combined material and new hooks of tinned steel. The new hooks became popular in *beugvisserij* as they had just the right size: shorter and thicker, and a float attached to the line above the hook for it to rise above seabed, attracting the cod.



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The excitement might be general, but only well consolidated ship owners could afford the new technologies when price on cotton rose because of the American civil war. Emphasizing improvements of productivity as a way of encouraging Dutch fishery, the *College* tried avoiding former dependence on foreign economic politics.²⁸⁴ The traditional hoeker vessels turned out to be too big and slow for using light cotton nets, and the fishers aimed for smaller and faster vessels also common in their neighbouring countries. The king's law, which dictated nationally built vessels, had hindered new input, and lifting it made the quick and manoeuvrable *logger* available. It had a deep draught and a big hold,

²⁸¹ Aan den Minister van Binnenlandsche Zaken (1858); p.20

²⁸² Verslag omtrent den staat der zeevisscherijen 1859; p.26-33

²⁸³ Tinned steel hooks used for long line cod fishery in the North Sea. Photos taken with permission at the Vlaardingen (Visserij) Museum in 2005 and Verslag van den staat der Zeevisscherijen in 1860; p.30-31 and Verslag omtrent den staat van de zeevisscherijen in 1862; p.26

²⁸⁴ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.14-15 and Verslag omtrent den staat van de zeevisscherijen in 1862; p.16,26-27 and 1863; p.15-16 and Verslag omtrent den staat der zeevisscherijen over 1864; p.13-14

and space for hauling in the nets, and ship owners began ordering loggers at the shipbuilding yards. The *College* considered the *hoekers* outdated, but what would the ship owners do with their *hoekers*? They were no longer competitive, still they were functional... this was the new perception of the world moving in; the vessel changing from being considered a fixed to being regarded a variable factor of production.²⁸⁵ In combination with the *loggers* ship owners started applying *schrobnet* instead of hooks and long line when fishing for cod, avoiding the hassle of buying baits, cutting down on number of fishers engaged, as *schrobnet* fishery was not as demanding as *beugvisserij*. Not all fishers agreed as to the utility of the *schrobnet*, but they had difficulties arguing against its profitability.²⁸⁶ They liked the steam vessels introduced a few years later even less, because of their bigger catch, bigger wear and tear on the nets, and their replacing traditional fishers's skills with mechanical skills. The *College*, on the contrary left it for the future to decide, which the best was, forgetting its own obligations from its foundation in 1854; protecting the SSB by preventing *schrobnet* fishing along the coast during winter.²⁸⁷ Most fish caught these days were kept fresh, bearing in mind the strict rules on bringing salt, and for this purpose, the fishers used ice onboard the vessel as well as in the warehouses in port. News arrived from the United States of America of the use of refrigerators to cool the fish automatically – it became evident that escaping tax on salt did not free the ship owner from preservation costs.²⁸⁸ While at first, the Dutch attitude towards new technology seems strange, on inspection, it is explicable. A relic of the Republic was the local taxes, implying the towns sustaining and upholding a competitive level against other towns applying their own tax. The local taxes hindered the benefits of new infrastructure by preventing proper trade throughout the country, so during the 1860s the national government lifted the local taxes in order to build a national railway network. A relic from king Willem I was the import tax on coal. The Netherlands barely had any natural resources, so they must import coal, and Willem I imposed the tax protecting the Southern [Belgian] coal. After 1830, this coal became foreign as well. The Dutch were then stuck with a natural monopoly: the peat, until German coal was introduced in the 1860s via the railway.²⁸⁹ Using steam engines was not easy anyway as they were not just turned on and off and they worked most efficiently when at full speed, for longer hours. Most Dutch businesses, including fishing vessels were not suited for large-scale production using

²⁸⁵ Verslag van den staat der Nederlandsche Zeevisscherijen over 1868; p.28-29 and 1869; p.11-12 and 1872; p.18

²⁸⁶ Verslag van den staat der Nederlandsche Zeevisscherijen over 1871; s.43 and 1872; p.41 and 1873; p.40-41

²⁸⁷ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1877; p.22-23 and 1884; p.11 emphasizing steam and 1885; p.59-60 presenting a Belgian engineer investigating the profitability of steam trawling

²⁸⁸ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1880; p.28-29

²⁸⁹ Zanden Jan Luiten van, Riel Arthur van; *The Strictures of Inheritance*; p.174-210

steam engines, which gave them the reputation of being reluctant towards new technology, but in fact, they practised sound business without, saving their money for striking once a flexible power like the electric power engine came about by the end of the 1800s. Similar characteristics existed in Norway.²⁹⁰

Cod as commodity

In spite of new fishing methods, new types of vessels and optional fishing seasons, cod and herring fishery were interdependent, occupying the crew twelve months a year keeping the marginal cost below or at the same level as the price. As herring fishery expanded quicker than cod fishery the interdependence had a negative influence on both.²⁹¹ More vessels fishing for herring during summer depended on an income from cod during winter, but cod was less numerous in the North Sea and fewer vessels profited from *beugvisserij*. The *College* asked the government for attention to the restrictions from the French tax on both cod and herring, but with little effect.²⁹² The ship owners then began substituting. In Vlaardingen and Maassluis, they quit *beugvisserij* for *schrobnet* fishery, but gave up a few years later because of poor catch, whereas in Middelharnis, Pernis and Zwartewaal they quit herring fishery and tried *beugvisserij* in intervals: six months salted cod, six months fresh fish, which went well.²⁹³ The *College* kept recalling the days vessels went to Iceland for cod during summer, regretting it becoming uneconomic; by 1878 the price on North Sea cod only just covered the variable factors of production, leaving no revenue for the ship owner. Consequently, vessels stayed in port during winter minimizing financial loss.²⁹⁴

Predictions from 1858, reducing import taxes in neighbouring countries because of a growing demand for cheap provisions, encouraged the *College* to ensure ship owners proper value for their produce.²⁹⁵ But by 1861, ship owners realized they were never to be sure of the price. They experienced “good weeks” and “bad weeks” depending on previous and simultaneous landings, and they must consider the port in which they landed their catch. If a Dutch port, the fishmonger included expenses for exporting in the price for the ship owner. If a foreign port, the ship owner did the export himself.²⁹⁶ The *College* then felt

²⁹⁰ Johnsen Berit Eide; *Seil framfor damp, Tradisjon eller økonomisk kalkulasjon? En teori om hvorfor mange Sørlandsredere fortsatte å satse på seilskip rundt århundreskiftet*; Aust-Agder-Av, Årbok for Aust-Agder Kulturhistoriske Senter, p.58-70, 1985-86, Arendal

²⁹¹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1869; p.43

²⁹² Verslag van den staat der Nederlandsche Zeevisscherijen over 1870; p.12,42 and 1876; p.11 and 1879; p.73 and 1880; p.94

²⁹³ Verslag van den staat der Nederlandsche Zeevisscherijen over 1871; p.43 and 1872; p.41,45-48 and 1873; p.40-41,46 and 1879; p.20

²⁹⁴ Verslag van den staat der Nederlandsche Zeevisscherijen over 1878; p.53 and 1879; p.19 and 1882; p.8

²⁹⁵ Aan den Minister van Binnenlandsche zaken (1858); p.63

²⁹⁶ Verslag omtrent den staat van de zeevisscherijen in 1861; p.39-40 and 1875; p.59

a need for emphasizing the importance of keeping the right proportions between production and cost values.²⁹⁷ In 1866, some ship owners accepted the challenge of meeting the demand for cheap provisions by allocation, salting fish selling them cheaply by differentiating the price, acknowledging sufficient demand for these as for the fresh and more expensive products, meaning possibly any fish was marketable.²⁹⁸ Now the *College* recommended paying attention to the difference between validating quantity or quality of the fish caught.²⁹⁹ The demand for fresh fish had risen, and ship owners obtained high prices on fresh cod even when catch rates fluctuated.³⁰⁰ The demand for salted cod was different, less elastic, and Dutch ship owners could not keep up with foreigners, the Scottish in particular. The variable factors of the Dutch production were proportionately too big and the *College* thought the fishers did not professionally come up to their wages.³⁰¹ Ship owners and fishers began experiencing the effects of an expanding profession: the market was filled to overflowing with fish.³⁰²

International politics and cod fishing

After the first insecurity of the liberal fishing politics, the number of Dutch vessels fishing for cod in the North Sea rose, adding to an overall increase in numbers of vessels fishing in the North Sea causing accidents, harassment and inconveniences. Simply asking the king for help no longer solved the problem. The countries bordering the North Sea showed an adaptive efficiency when deciding to intervene to stop the negative externalities, and on 2 May 1863 an international agreement was made securing lights on vessels at sea at night, yet by 1873 the ratification of the agreement had not taken place in all countries, and by 1875 new adjustments were made.³⁰³ The incentive to find and use the method agreed on – making lights compulsory for all vessels - was not strong enough to make it happen. The intention of having police at sea replacing the survival of the fittest with law and order was postponed as well.³⁰⁴ The German government then acted independently passing a

²⁹⁷ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.10

²⁹⁸ Verslag omtrent den toestand van de zeevisscherijen in 1866; p.8-11 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.2,7

²⁹⁹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1867; p.16

³⁰⁰ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1872; p.19 and 1873; p.40-41 and 1875; p.15 and 1876; p.13 and 1881; p.103 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.3

³⁰¹ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1876; p.48 and 1877; p.15 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.5

³⁰² Verslag van den Staat der Nederlandsche Zeevisscherijen over 1877; p.68-69 and 1884; p.7-8

³⁰³ Verslag van den staat der Nederlandsche Zeevisscherijen over 1871; p.19-20 and 1872; p.14-15 and 1873; p.17-19 and 1878; p.17-19 international agreements 02.05.1863 Staatsblad nr.51, 13.06.1875 Staatsblad nr.118 and Verslag van den staat der Nederlandsche Zeevisscherijen over 1880; p.40 and Pedersen, Madsen, Nielsen; *Økonomisk Teori i internationalt perspektiv*; chap.9 and North; *Institutions*; chap.9

³⁰⁴ Verslag van den staat der Nederlandsche Zeevisscherijen over 1871; p.19-20

law forbidding foreign vessels fishing or staying within its territorial waters and imposing fines for any breaches. The *College* discussed the German law, what they considered the biggest problem to fishing: the behaviour of the English at sea, and if a need for a legal equivalent or naval patrolling along the Dutch coast. The *College* was afraid of any English retaliatory measures such as prohibiting foreign vessels in English territorial waters, proposing an observing naval patrol among the Dutch fishing vessels at sea instead.³⁰⁵ Executing the patrol did not stop complaints about the English though, nor the English from complaining about the Dutch.³⁰⁶ By 1881, it had gotten out of hand so the countries got together again in The Hague to finally stop the negative externalities by agreeing to a common set of rules in the North Sea. Among the rules were visible identification on vessels, number and name, caution when anchoring close to drifting nets or lines of others, paying respect to national territorial waters, not to cut or empty nets or lines belonging to others and remembering to show lights at night. The naval police might check the identification and any damaging tools onboard the vessels and if possible solve any conflict on the spot. For the naval police to find and protect fishing vessels at sea the fishers supplied the police with information on where and when they went fishing; a competitive secret not revealed to strangers hitherto.³⁰⁷ Misconceptions appeared at the conference concerning the definitions of *beug-* and *hoekwantvisserij* occupying a big area when in use, and concerning the disturbances to surroundings by the trawl when in use. Implementing the new international treaty took time because of national legal adaptations and because of practical concerns; the *College* worried how a ship owner possibly legally proved the loss of gear, once it had gone.³⁰⁸ In fact, all countries had more issues of mutual concern like what to do about wreckage or alcohol abuse among crew, recognizing the relevance of future international collaboration on the North Sea.³⁰⁹ A situation with serious international consequences occurred to the *College* in winter 1874-75, when a steamboat left Rotterdam for the North Sea filled with arsenic to be dumped a sea. Attempts to stop the vessel came too late and when seeking information on the origin of the cargo the *College* realized repeated dumping of arsenic in the North Sea had taken place.³¹⁰ The minister of the interior admitted having signed an agreement with the German arsenic factories on dumping arsenic in the North Sea via Dutch ports and

³⁰⁵ Verslag van den staat der Nederlandsche Zeevisscherijen over 1875; p.19-21

³⁰⁶ Verslag van den staat der Nederlandsche Zeevisscherijen over 1876; p.15-17

³⁰⁷ Verslag van den staat der Nederlandsche Zeevisscherijen over 1881; p.37,39-54 and 1885; p.38-40

³⁰⁸ Verslag van den staat der Nederlandsche Zeevisscherijen over 1882; p.22-23,32-34, international treaty of 21.06.1881 Staatsblad nr.76 treaty ratified by 06.05.1882, in treaty 15.06.1883 Staatsblad nr.73 and 07.12.1883 Staatsblad nr.202 coming into force internationally 15.05.1884

³⁰⁹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1884; p.28,31-34

³¹⁰ Verslag van den staat der Nederlandsche Zeevisscherijen over 1875; p.21 the documents for the cargo said the arsenic trioxide had been bleached by chemical analysis becoming so called arsenic water holding 11,5% pure arsenic

territorial waters, which resulted in having already dumped 2-300.000 kilo of arsenic water. He did not feel comfortable with the act, nor with the danger to the crew on the steamboat dumping the barrels in bad weather. The government negotiated unsuccessfully with the Germans on closing the agreement. Maybe, the *College* brought about enough attention to the problem for the Germans to withdraw, but where did the arsenic go then and what if the fishers caught a barrel of arsenic in their *schrobnets*, or the fish died of poisoning? These questions were implicit if asked at all. A few barrels on the bottom of the ocean was a minor concern compared to the Danes' defeat to Bismarck in 1864 and the French defeat in 1870-71; the Dutch probably chose a diplomatic style by doing a favour to German industry. The surrounding countries were industrializing at full speed, while the Netherlands kept pace on a small scale.³¹¹

Trawling and the fish stock

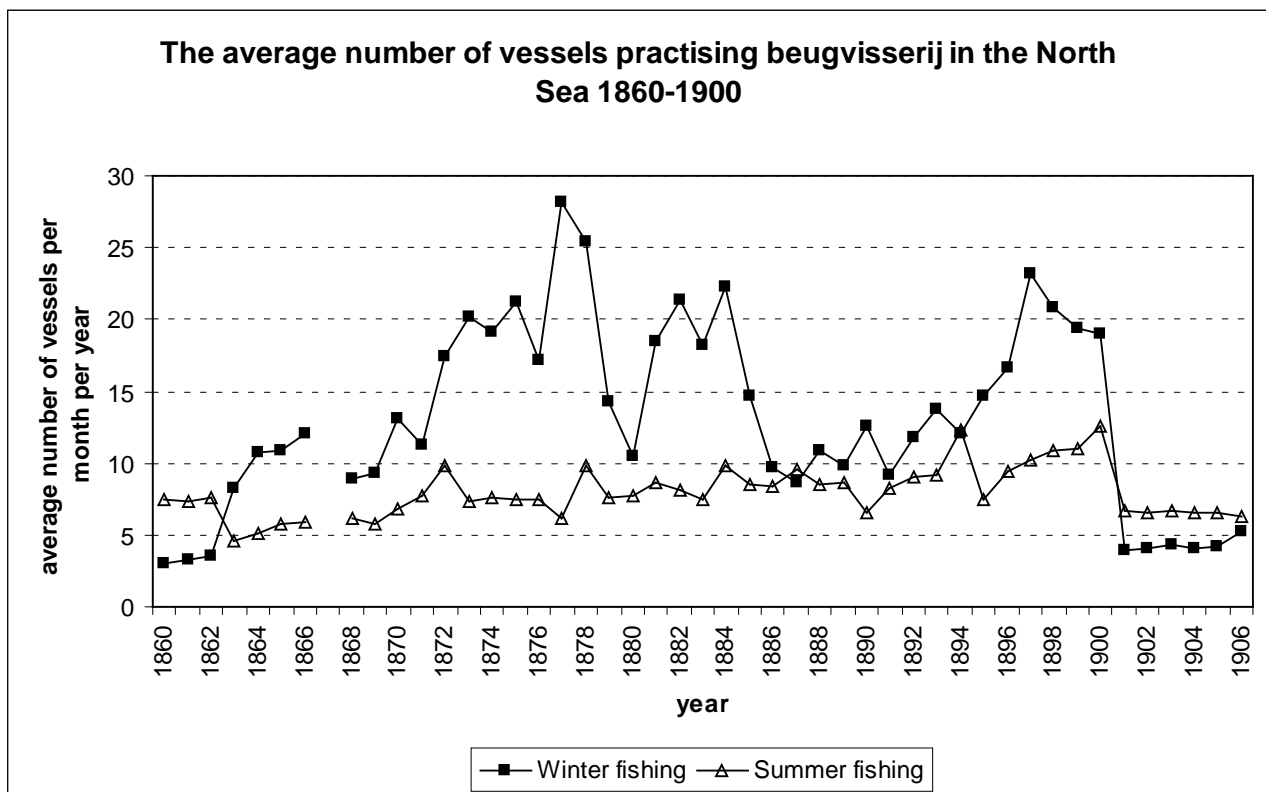
A year later, in 1876 P. P. C. Hoek began his personal scientific investigations on Dutch fishing. There is no mentioning of Hoek considering arsenic poisoning an issue. He practised local research based on his own means, and herring fishing in Zuiderzee soon became important as the previously flourishing business now declined. Hoek sought information into fishing and the life of fish, but not so much into the circumstantial changes. Publishing a drawing of a food chain visualising man's minor impact on the fish stock, the *College* had assured the fishing industry of sustainability around 1860.³¹² In 1865, the English appointed a committee to investigate the actual fishing methods and circumstances based on three questions: did productivity increase or decrease, did fishing show any destructive effect on fish stocks and did fishing suffer legal restraints. Because of a plentiful fish stock in the coastal waters, more people had engaged in fishing expecting an increase in productivity. Many of the fishers complained about the *schrobnets*, considering the use of it the end of fishing, but when having to choose between either *schrobnets* and freedom or legal restrictions they had no more complaints, the English committee said. The committee thought any remaining laws on fishing must be cancelled, securing freedom.³¹³ Contrary to the English committee, the *College* now feared a continuous extension of the fishing fleet leading to exhaustion of the sea. Nevertheless, Dutch fishing business had become more flexible on the time of fishing season than hitherto, benefiting from salted bait, new hooks, net or line, allowing *schrobnets* fishery during wintertime; considering the amount of fish being caught a means of being

³¹¹ Broadberry Stephen, O'Rourke Kevin H. ed.; *The Cambridge Economic History of Modern Europe*; vol.1, 1700-1870, Cambridge 2010

³¹² Verslag omtrent den staat van de zeevisscherijen in 1862; p.20-21

³¹³ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.18-23

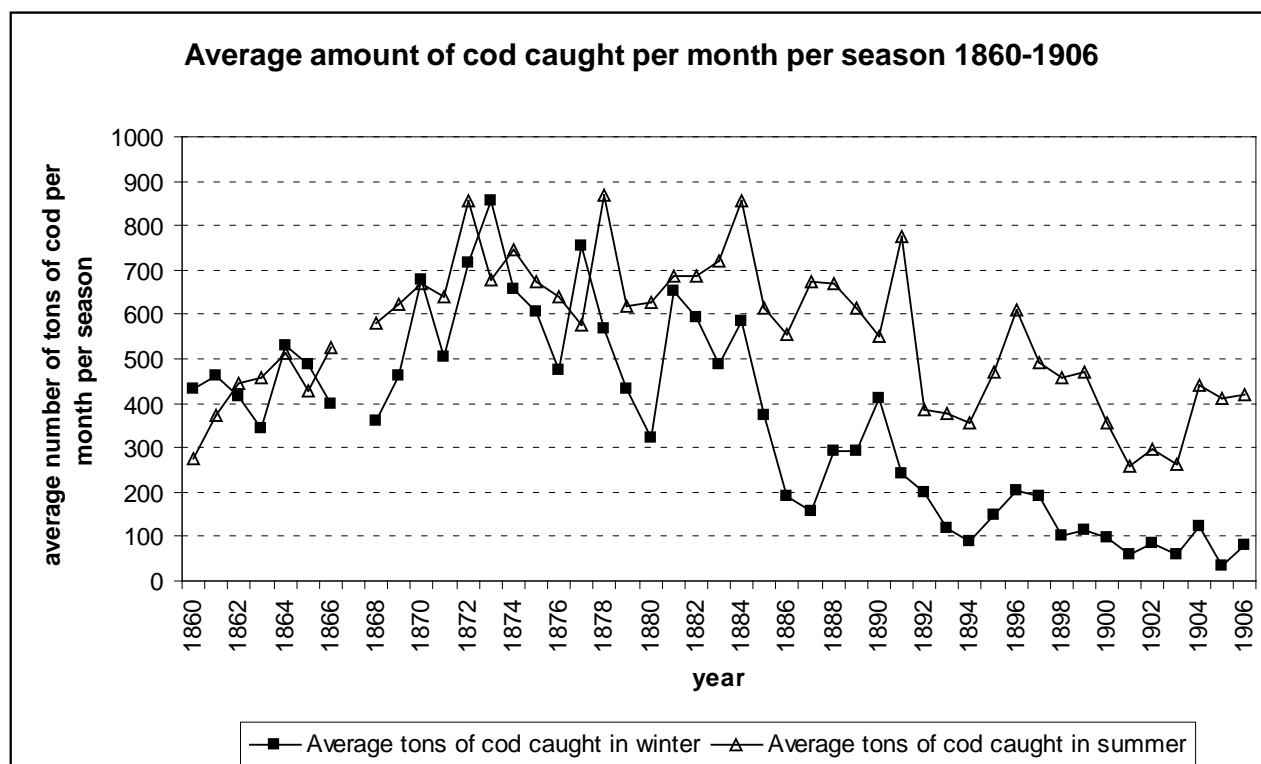
successful.³¹⁴ The fact that some fishing grounds no longer supplied fish as usual was considered momentary.



³¹⁵ The cod landed in the Netherlands after 1857 no longer referred to certain types of seasonal cod fishery, and the ship owners simply reported their catch once a month whether caught at sea or near the coast using long line or *schrobnets*. I divided the catch data from 1863-1900 into two groups, summer and winter, facilitating comparison with the data from 1818-1853.

³¹⁴ Verslag omtrent den toestand van den zeevisscherijen in 1865; p.12 and Verslag van den staat der Nederlandsche zeevisscherijen over 1867; p.16,37 and 1873; p.16 and 1877; p.63

³¹⁵ Verslag van den staat der Nederlandsche Zeevisscherijen over 1872; p.18 and with graphs on the Dutch cod fishery from 1863-1906



If there were any problems of exploitation, they originated from the English as they outnumbered the Dutch.³¹⁶ Referring to the English specialist Edmund Holdsworth's description of the trawl fishery along the British coast, the *College* concluded:

"niets van hetgeen er in komt, kan er weder uit, en zoo doende wordt de bedding der zee schoon geveegt van al wat left, klein en groot, dat onder het bereik komt van dit net"

well aware that there was a decline in cod being landed from Dutch *beugvisserij* proportional to the increase in trawling.³¹⁷ In the late 1870's, the destruction of juvenile fish caused concern in coastal waters and as the English trawlers went to sea because of the disappearance of fish near the coast, juveniles on the banks started diminishing.³¹⁸ *Beugvisserij* during winter being no longer profitable, Dutch vessels either remained in port or joined coastal fishing using *schrobnet*. A possible relationship between the decline in demersal fish stocks and the voluminous catch of herring year upon year did not seem to occur to anybody. Maybe the Dutch just felt a long desired revival of former glory?³¹⁹ An English investigation made by Frank Buckland and Spencer Walpole on the consequences of trawling agreed to the destruction of juveniles without considering it a threat to the well-being of fishing. The investigation refused any English legal intervention against coastal trawling and the *College* doubted any forthcoming or easily enforced international

³¹⁶ Verslag van den staat der Nederlandsche Zeevisscherijen over 1875; p.21 and 1877; p.63

³¹⁷ Verslag van den staat der Nederlandsche Zeevisscherijen over 1877; p.24-26

³¹⁸ Verslag van den staat der Nederlandsche Zeevisscherijen over 1878; p.25-26

³¹⁹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1879; p.19-20 and 1881; p.14-15

agreement. The reason was that the English sold the juveniles as whitebaits and they did not intend to do otherwise; an example of a certain connection between production and destruction, the *College* said, hoping a naval vessel patrolling the Dutch coast protected their coastal fish sufficiently.³²⁰ Ironically, Hoek asked the government for financial support to further the research at his Dutch zoological station at Nieuwediep. He presented Buckland and Walpole as role models, aiming at providing similar investigations to the Dutch state...³²¹ Discrepancy in perception of the fish stock in the North Sea existed throughout. An English fishmonger telling his experience contradicted with Huxley's proclamations at the Norwich fishing exhibition. Huxley, like his predecessors, refused to acknowledge a relationship between a growing fishing industry, and an annihilation of the fish stock, while the fishmonger witnessed the many vessels landing fresh fish, yet each landing less, causing prices to rise by ten fold, because the flatfish had decreased in number in just a few years.³²² Knowing some ship owners practised neither *beugvisserij* for cod nor coastal *schrobnet* visserij for flatfish anymore because of poor catch, the *College* added to the discrepancies by suggesting the sea temperature or the fish moving to and from spawning grounds as possible explanations to the decline.³²³ At the same time, a law passed in the Netherlands on the minimum size of fish for consumption, resulting in small fish being discarded at sea. Ship owners asked for further regulations on the mesh size of the *schrobnet* preventing small fish from being caught at all, but with no decision being made.³²⁴ In 1884, the English published yet another report on the consequences of trawling. It was based on fishers's assertions except the fishers preferred traditional fishing so the report commission divided the result into *beugvisserij* and trawling, having reservations about the result. The commission believed their perfect gear enabled them to control their catch and thereby the fish market in port and the fish stock at sea, arguing that when fishing they fished on different fishingbanks and weather changed, admitting a decline in stock near the coast, not at sea, except to sole. The fishers all claimed a decline in flatfish along the coast originating from the commencement of trawling, steam trawling in particular, destroying the spawn and the juveniles, disturbing and destructing the banks and the spawning grounds. Fishmongers confirmed the decline in flatfish adding nevertheless that more fish were sold at the market than hitherto, while at the same time more vessels landed less each. Fishing juveniles divided trawlers from *beugvisserij*. The commission did not consider the destruction a threat to the fish stock,

³²⁰ Verslag van den staat der Nederlandsche Zeevisscherijen over 1879; p.24-32

³²¹ Verslag van den staat der Nederlandsche Zeevisscherijen over 1880; p.49-53 and Groot S.J. de; *Een Eeuw Visserijonderzoek in Nederland 1888-1988*; p.1-22

³²² Verslag van den staat der Nederlandsche Zeevisscherijen over 1880; p.18-21

³²³ Verslag van den staat der Nederlandsche Zeevisscherijen over 1881; p.17-18 and 1882; p.8-9

³²⁴ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1883; p.47-50 and law of 21.06.1881 nb.76

nor did it recognise the disappearance of herring and haddock from certain banks following trawling, as it knew of similar disappearances where no trawling took place. No statistics existed on English fishery and fishers's recollections were not considered trustworthy so no conclusion was drawn on the report.³²⁵ The following year the *College* formally declared its disagreement with the English commission, Professor Huxley in particular, wondering if the best fishing gear was that which caught the most, knowing something must be wrong being 120 herring to a kilo in Zuiderzee, where similar fishing methods had been applied. Contrary to the English the Dutch *College* concluded they did not like the trawl because it caused a decline in the fish stock at sea and the Dutch government legally reacted against it and initiated its own scientific investigation into the consequences to the living at sea.³²⁶

The freedom of action implied a continuation of habitual doings

Dutch cod fishing evolved in a time when the national political power switched between liberals and Christian conservatives, and when franchise was confined to people's direct taxation, qualifying only about 10% of the Dutch male population.³²⁷ It was a time when individualism replaced former solidarity within the local communities of the Republic. An interesting example of importance to fishing was the persistent ship owners' private organizations practising the so-called *jagerij*; organizing vessels going to sea collecting each season's first catch from the fishing vessels, bringing it back quickly aiming at obtaining a good price. The organization aimed at herring fishing, but summer cod fishing, *Kolvisserij* was included as well. It existed long before the French occupation, and kept a monopoly after the revision of the laws on fishing by Willem I in 1818. It meant, the fishers must participate or they must refrain from landing their catch until after the *jager* vessels landed theirs, alternatively after a set date (15 July). The *Jagerij* had a positive influence on the *Kolvisserij*, as it sustained itself and never asked for financial support. It also supported coastal fishing as *jagers* from different provinces collected fresh cod caught along the coast and sold it at their markets. *Jagerij* was not possible in winter, instead the fishing vessels returned independently with their catch.³²⁸ The system superseded the reforms in 1857 in that the laws on *jagerij* no longer existed, leaving the ship owners free to practise the *jagerij*. The benefit to the ship owners participating caused the persistence of the *jagerij*. Vlaardingen and Maassluis made use of their *jagers* and of their superior

³²⁵ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1884; p.37-68 after some investigating into trawling the Dutch forbade periodic trawling at the northern coast protecting the "local" juveniles

³²⁶ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1885; p.41-48,65 The College forgot the praising of Monnickendam and the Zuiderzee fishing when liberalising Dutch fishing; or it did not have the courage to admit the mistake and all its implications

³²⁷ Kossmann E.H.; *The Low Countries 1780-1940*; p.194

³²⁸ Nationaal Archief 3.11.05 inv.1 p.4,22 mentioning *jagerij*

position to vessels from smaller towns including coastal towns as there were no coastal ports hosting *jagers*. Some coastal ship owners changed from bom vessels to logger vessels and therefore must change homeport, as the loggers did not land on the beach. They often moved the vessel to Vlaardingen.³²⁹ During the 1880s, the *jagers* began considering a change of dates as the traditional herring season beginning on June 15 did not leave time for the herring to mature anymore, providing too many juveniles in the nets. The Dutch asked their prime competitor, the Scottish if they would agree on a later fishing season for herring, but with no success. It is thought that the Dutch fishing vessels maintained their *jagerij* because they did not change to steam, but only when motor vessels came in the 1890s, they rendered the *jagerij* superfluous.³³⁰ Still, there is evidence that the ship owners with the most vessels continued arranging for *jagerij* having one of their own vessels collect fish from others at sea and returning to port.³³¹ The English did try fleeting as a similar yet dangerous steam driven *jagerij*, but it did not match the geographical or the organisational conditions of the Netherlands.³³² Liberalisation allowed the Dutch to do what they wanted to do, legally, and so they did. The freedom of action implied a continuation of habitual production means when relevant, just as it changed production factors within certain limits when opportunities matching their needs occurred late in the 1800s.

Dutch cod fishing heading for the 1900s

Cod fishing struggling for survival

At the close of the century, Dutch cod fishing business still claimed to be a business struggling for survival. The cause for concern was different though compared to the beginning of the century. Supposedly, recurring issues like the *beugvisserij* no longer constituted a national fishing business. Cod fishing had two overall characteristics, at the beginning of the 1800s. One was that the fishers fishing for cod lived and registered their vessels in certain towns, fishing being the prime occupation. Another was that, in connection with cod fishing, these towns were ranked or categorized according to when

³²⁹ The *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen*; 1818-1900 hold information on the *Kommissionarissen, Boekhouders, Jagers* and tons of herring landed that is the ship owners sending off the ships, the *jagers*, for *jagerij* and their book keepers.

³³⁰ Assenberg Frans W.; *De haringjagerij, in het bijzonder te Vlaardingen in de negentiende eeuw*; *Netwerk, jaarboek Visserijmuseum*; Vlaardingen 2001, vol.12, p.7-33 Assenberg uses sources from Stadsarchief Vlaardingen inv. 0016 *Commissarissen van de haringjagerij*; containing material on cod during the 1800s see also Verslag van den Staat der Nederlandsche Zeevisscherijen over 1886 p.45-46, 1893; p.79,140

³³¹ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1901 p.103-104 this year there were 13 *jagers*, the first landing 117 *kantjes* of 2578 tons herring from 9 vessels

³³² Robinsen Robb; *Trawling, The Rise and Fall of the British Trawl Fishing*; Exeter 1996, p.71-77,99

and where the fishers went fishing.³³³ It seems the fishers sought to comply with getting a good catch while avoiding overfishing. Following liberalisation in the mid-1800s, the law laid down to the fishers that:

*"Er wordt aan elk een volkomen vrijheid gelaten, de verschillende takken van zeevisserij naar eigen goedvinden uit te oefenen".*³³⁴

Thereby, *beugvisserij* became one of several options to the fishers, irrespective of their homeport. The fishers in Middelharnis, Pernis and Zwartewaal maintained winter *beugvisserij* as they landed their cod fresh at any convenient port; supplementing by landing salted cod during summer. Fishers from other ports kept their vessels in port during winter or switched to *schrobnet*. By 1889, fishers from Middelharnis, Pernis and Zwartewaal resigned because of a loss-making decline in number of cod. Colleagues using *schrobnet* during winter also resigned because of poor catch.³³⁵ At the beginning of the 1800s all fishers had agreed, they must not use *schrobnet* with meshes smaller than three *duimen* times nine *strepen* along the coast at any time, while meshes bigger than this were accepted at sea, nor must they use any *schrobnet* along the coast from November 15 to February 15; nets for shellfish being an exception.³³⁶ The commission's recommendation to the king in 1854, prior to the liberalisation of fishing, did include the prohibition of *schrobnet* fishing along the coast during winter, but the subsequent law on fishing did not. Hence, 35 years later, there were no flatfish for the coastal fishers to catch and no habitat for the juvenile cod to grow up; another supposedly recurring issue: the question if *schrobnet* fishing along the coast during spawning season constituted a sustainable fishing business.³³⁷ The fishers continued *schrobnet* fishing and/or *beugvisserij* only to keep well qualified fishers for the herring fishery.³³⁸ The reason why this did not ring the alarm bell among Dutch politicians was twofold. One was that the same happened in England, but the English (politicians) did not worry much; England

³³³ As described in the **Introduction**, these characteristics originated long before 1800, see i.e. Kranenburg H.A.H.; *Het Visserijbedrijf van de Zijdenaars in de 15e en 16e Eeuw*; Tijdschrift voor Geschiedenis, 1949, vol.62, p.321-333

³³⁴ Nationaal Archief 3.11.04 inv.122, law of 13.06.1857 no.86 article 1 (the liberal fishing politics)

³³⁵ Verslag van den Staat der Nederlandsche Zeevisserijen over 1885 p.104-112, 1886 p.101-108, 1887 p.118-126, 1888 p.105-112, 1889 p.8,112-120, 1891 p.84, 1892 p.169-176, 1893 p.11,167-178, 1894 p.86-97, 1895 p.113,138-152, 1896 p.66,91-99, 1897 p.90-98, 1898 p.93-94, 1899 p.60,117-127, 1892 p.169-180, 1893 p.167-180

³³⁶ As described in the part on **Regulating and supporting Dutch cod fishing financially**, Nationaal Archief 3.11.04 inv.122 p.167-70, law of 15.11.1825 no.75

³³⁷ Verslag van den Staat der Nederlandsche Zeevisserijen over 1885 p.114-121, 1886 p.109-114, 1891 p.124,209-214, 1892 p.183-185, 1894 p.100-101, 1895 p.152-156, 1896 p.102-111, 1897 p.101-105, 1898 p.106-112, 1899 p.131,136, 1892 p.183-189, 1893 p.183-190

³³⁸ Verslag van den Staat der Nederlandsche Zeevisserijen over 1897 p.102

being in many ways a role model throughout Europe.³³⁹ The other was that herring was plentiful, causing the Dutch fishing fleet to expand.

The recognition of a need for investigations into the survival of the fish stocks

In 1886, the *College*, representing the fishing business, worried and insisted it would no longer hold a backward position in fisheries science compared to other countries bordering the North Sea or the North Atlantic. The French now prohibited fishing using *kuilnet* within three miles off the coast and any fishing along the coast using French *sleepnets*, *belot*, *errand* and *filet tournant*.³⁴⁰ Apart from Hoeks private investigations, the *College* managed a few scientific investigations by qualified people, but it liked to further this approach as a coordinated basis of its own decisions. It had not yet had any luck when asking the government for the establishment of a scientific institution, so it sat up an organization itself: "*Vereeniging ter bevordering van de Nederlandsche visscherij*" aspiring to the development of fishing in the best sense of the word. The goal was to impart the scientific knowledge and practise available to fishing without depending on governmental support or sympathy. A Scottish professor, McIntosh had gone fishing on Scottish trawlers recording their catch, seeing cod of just 15 cm. He had also been concerned that the wooden plates attached to the schrobnets, when drawn along the bottom of the sea near the coast, killed all the sea urchins, bivalves, crayfish, starfish and worms nourishing the fish, consequently prohibiting trawling in certain areas at certain times of the year. To the *College*, fishing at sea presupposed protecting the habitat of the eggs and juveniles in the coastal waters during spawning season.³⁴¹ Because of fishers's complaints internationally of a decline in the catch, and after conversation with the Chamber of Commerce and at the request of the *Vereeniging ter bevordering van de Nederlandsche visscherij*, the *College* asked the government for a re-introduction of a law on mesh size on schrobnets. The *College* asked for a decision based on recent statistical research on the state of the fish stock. This required a scientific institution, an indirect indication of an explicit need. In 1888, the government responded positively, while the *Vereeniging ter bevordering van de Nederlandsche visscherij* already established financial means for the erection of an independent scientific institution at Helder, no longer asking the government for its approval, but just for a few extra *guilder*.³⁴² Hoek then became the scientist employee at

³³⁹ Robinson Robb; *Trawling*; p.49-52,87,97-106 and Broadberry Stephen, O'Rourke Kevin H. ed.; *The Cambridge Economic History of Modern Europe*; vol.1, 1700-1870, vol.2 1870 to the present Cambridge 2010

³⁴⁰ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1886 p.51-52

³⁴¹ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1886 p.44-45,59-65,

³⁴² Law of 19.01.1820 no.2 Verslag van den Staat der Nederlandsche Zeevisscherijen over 1887 p.48-50, 56-61, 1888 p.55-56 The *Vereeniging ter bevordering van de Nederlandsche visscherij* was housed in Rotterdam and Hoek G.; *Economische geschiedenis van het Rijnmondgebied, de haring- en beugvisserij*;

the research institution at Helder, continuing his research on the Zuiderzee fishery. The conclusion to his report surprised the *College*. In spite of exploitation of the fish stock in the Zuiderzee caused by trawling, Hoek did not suggest any prohibition of fishing. Instead, he suggested testing the effect of different kinds of net. Lacking recent experiences from Scotland or Dutch coastal fishing, the *College* posed four questions for Hoek to consider:

- describe the rise or fall in the current decline in the fish stock along the coast.
- consider if there is a continuous decline in the fish stock
- and if so, is the decline explicable?
- propose legal or other precautions to be taken removing or diminishing the causes

It also made a draft for a contract for the research institution and the scientist.³⁴³

Code of conduct when fishing

Meanwhile, the *College* faced complaints on collisions and damage to fishing gear because of an increasing number of fishing vessels in the North Sea. Some expressed their anger by implying cruel methods fitting vessels with *duivels*, (*dreganker*), *voorwerp* or other knife-like tools at the front of the vessel just below the waterline, cutting anything the vessel passed. The international maritime convention on good behaviour at sea included a provision for vessels to show lights at night preventing collision and eventual damage, but it did not suffice. Misunderstandings to what kind of light and where brought about the specification of white light in the foremast, green light starboard and red light port.³⁴⁴ The Dutch had their doubts to the efficacy of the agreement because the fishing nations with the most powerful (steam driven) vessels overruled the others at sea, knowing they were beyond the reach of police.³⁴⁵ The convention divided the North Sea into respectively extra and national territorial waters, the latter reaching three nautical miles into the sea from the coast. National territorial waters belonged under the particular nation and national jurisdiction allowing only national vessels within national territorial waters. Again, not everybody seemed to respect the agreement, causing the *College* to remark that the sea was not divided into British and non-British waters. The English preferences for fishing near the Dutch coast complicated Dutch research and Dutch politics on maintaining a SSB and a sustainable fishing business; similar to concerns at the beginning of the 1800s.³⁴⁶

Economische en sociale geschiedenis; p.19, Doctoraal werkcollege, Erasmus Universiteit Rotterdam, Faculteit der Economische Wetenschappen; Rotterdam juni 1975

³⁴³ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1889 p.41-59, 1890 p.117 Law of 18.07.1890 no.25 renewing the contract on 24.12.1894, and 1995 p.5

³⁴⁴ International Treaty of 06.05.1882 passed in the national law of 15.06.1883 no.73 see also law of 26.07.1885 no.168 and Verslag van den Staat der Nederlandsche Zeevisscherijen over 1887 p.36-48, 1888 p.42-45, 1890 p.53-55,58-59, 1892 p.48-50

³⁴⁵ Verslag van de Staat der Nederlandsche Zeevisscherijen over 1885 p.38, 1886 p.33-39,

³⁴⁶ As described in the part on **The origin of overfishing?** and Verslag van den Staat der Nederlandsche Zeevisscherijen over 1892 p.94-98, 1993 p.28, 1894 p.38

The French and the German, rejecting liberal ideology, applied protectionist fishing politics, supporting their fishers financially, like the Dutch during the first half of the 1800s. They also restricted import by imposing tax on foreign fish. France and Germany thereby hindered import of Dutch fish, but instead of claiming its commercial rights, and protecting the habitat of the fish stocks in its own national territorial waters, the *College* consented with its politicians awaiting future international conferences solving the problems.³⁴⁷ Fishing was part of international politics having an impact on the life of the fishers and the fish. The small countries' fear of being overrun by big European powers was superseded by a progressive spirit arising in the 1890s. The economic crisis of the 1870-80s gave way to technological progress, and a desire for a viable future. Part of the international politics was colonial. The Netherlands developed a new set of colonial politics in 1892 called the "ethic politics" practising a central rule of the East Asian aborigines, supplying good profit to the Dutch and education, health care, banks and means of communication to the locals. In the Cape Colony [South Africa], the Dutch waged war against the British, which lasted 1899-1902.³⁴⁸ If a country felt stepped on in international politics it might not give in on totally different matters say the whitebait problem; hence the lengthy negotiations at the international conferences.

Scientific trawl survey

One such took place in London in 1890, chaired by the National Sea Fisheries Protection Association hosting delegates from Belgium, France, Germany, Denmark, Sweden, United Kingdom and the Netherlands. At the conference, the topic was to find a solution to the consequences of unrestricted fishing in the extra territorial waters of the North Sea or the increased amount of landed juveniles all around. The delegates decided on some resolutions, manifesting the damage to the fish stock in extra territorial waters, agreeing on resisting this without acting in any way precipitately or without a sound scientific basis. The delegates collected a number of questions on the topic for the governments to answer. In the Netherlands, Hoek responded to the questions, collecting statistical data on the Dutch North Sea fishing, including scientific trawl surveys reporting the catch of different species at certain locations. He also determined the time of the year and the day prohibiting coastal fishing, which gear to allow or forbid and what size of fish to throw back into the sea.³⁴⁹ There was no question for him to answer reflecting on the freedom of fishing, nor on the choice of fishing banks within national territorial waters. The Scottish already closed

³⁴⁷ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1885 p.25, 1886 p.19-20, 1896 p.163-164 The Belgians decided to support their fishing business financially in 1897 assenting to French and German policy

³⁴⁸ Kossmann E. H.; *The Low Countries 1780-1940*; p.398-412

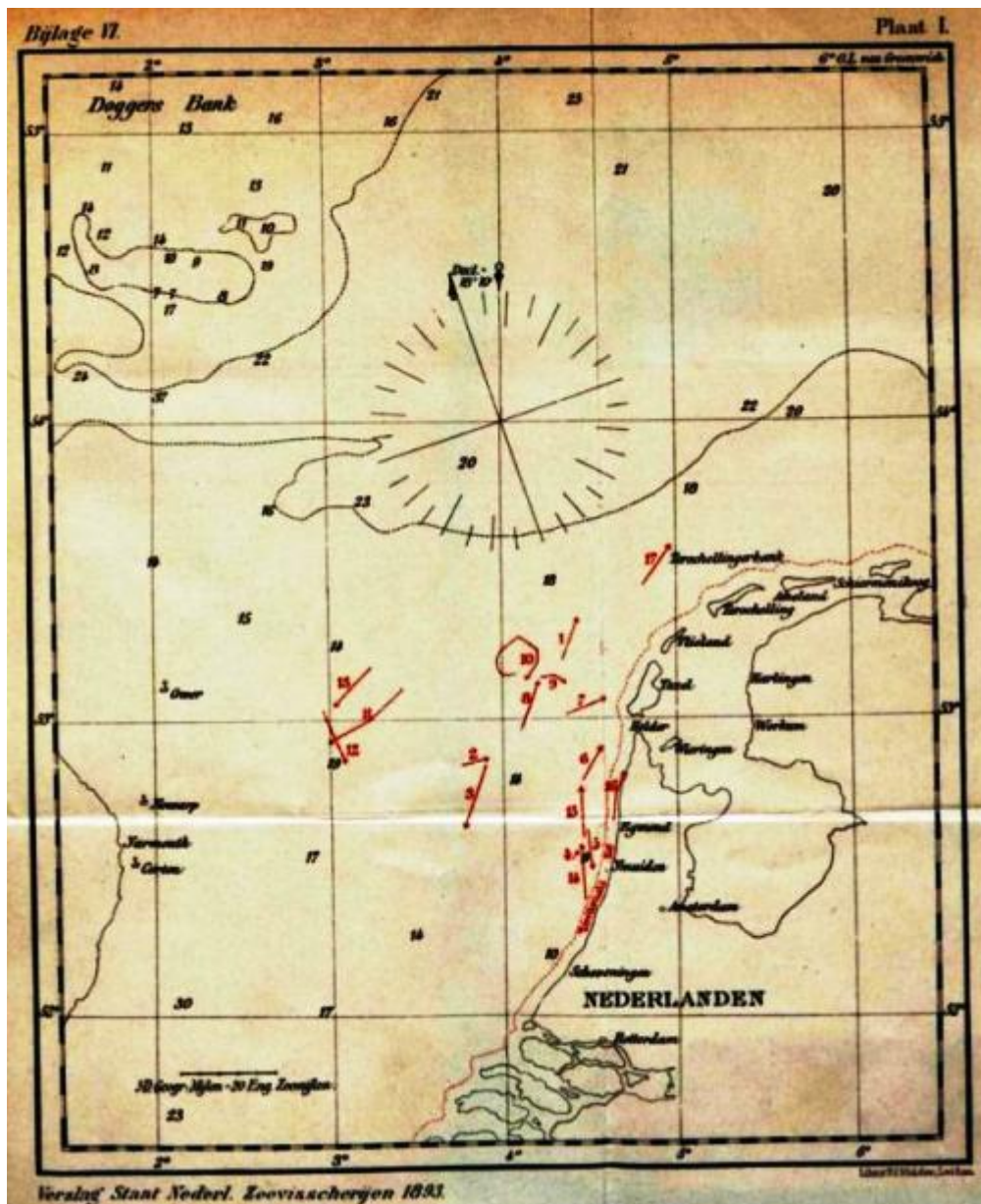
³⁴⁹ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1890 p.61-64 Hoek being the one agitating for steadiness and scientific cautiousness and 1891 p.36-39, 125-127

areas to fishing based on the results of their trawl surveys. They had a steam driven vessel "Garland" at their disposal, and they managed an investigation of 200.000 fish of all known edible fish including cod, identifying all species, their eggs, their particular spawning area along the coast, the hatching time of the eggs and the characteristics of the lifetime of the fish. Impressed by these results, the *College* noted that

*"Ofschoon de trawlervloot eene zoo aanzienlijke uitbreiding heft gekregen, is de hoeveelheid gevangen platvisch volstrekt niet toegenomen in evenredigheid met de vermeerdering der vangmiddelen... Het is duidelijk, dat, moge al het verbod van de schrobnetvisserij in de territoriale wateren doeltreffend gebleken zijn ter wederbevolking van de zee dicht bij de kust, het vroeg of laat noodig zal wezen, veel verder te gaan en maatregelen te nemen om de schrobnetvisserij ook op de verder afgelegen banken te reglementeren."*³⁵⁰

It also noted that Hoeks job should imply similar research, replicating their request to the government for a steam trawler. Hoek then had the opportunity of renting HD 318 for a month from a local ship owner doing scientific trawl surveys with the assistance of professional fishers. In 1893, he made a report on the results to the *College*.

³⁵⁰ Verslag van den Staat der Nederlandsche Zeevisserijen over 1892 p.13-33,75-78



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This is P. P. C. Hoeks map on his scientific trawl surveys in 1892. Though keen on reporting flatfish, Hoek also caught cod on his trawl number 11 and 16. The area close to the coast near Egmond-aan-Zee, number 16, matched a place the fishers talked about as being good for cod - until the late 1800s. The vessel had been at sea fishing 17 out of 30 days from late August to late September 1892 fishing within the Dutch territorial waters one day at Hoek's request. He used an English net "kor", recording the position, depth and length of the draw, and noticed the juveniles slipping out between the meshes of the net into the water, leaving only bigger fish for the fishers. He also noticed both edible and non-edible species, throwing back the latter into the sea, recording only the flatfish in his report.

³⁵¹ *Verslag van den Staat der Nederlandsche Zeevisserijen over 1893* p.321-339 on Hoeks report on his scientific trawl surveys in the North Sea

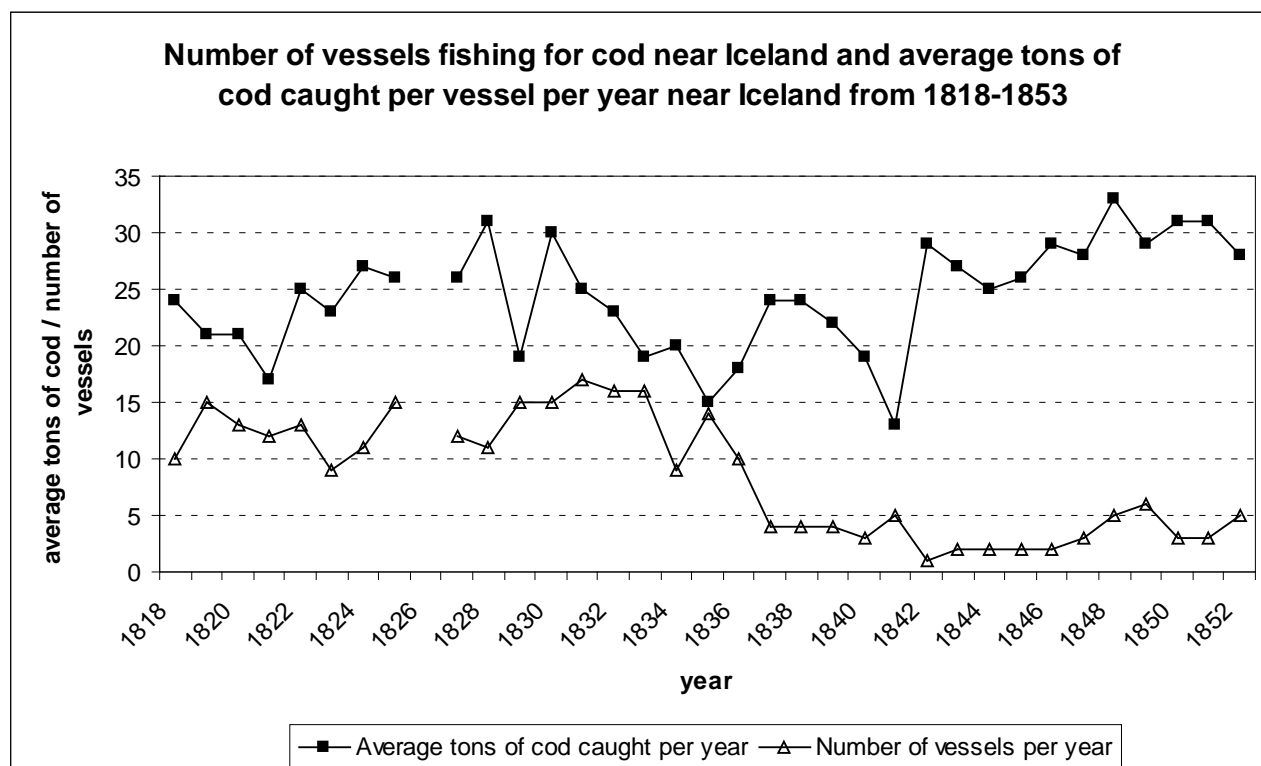
Hoek admitted his research provided no evidence as to why fishing and the fish stock in the North Sea declined. Nevertheless, he insisted on a scientific basis for judicial measures on fishing. He disregarded the Scottish research, based on practical surveys showing juveniles further out to sea than two miles, as imposing restrictions on fishing based on presumptions whereas the Dutch – and the English – he claimed, let the fishers fish as usual until their scientific research showed evidence indicating prohibition. He referred to the English House of Commons' commission's report following the 1890 conference seeing no sign of exploitation of cod, haddock or herring, whereas flatfish in the Waddensea area showed signs of overfishing, and

“...dit voorstel steunt hoofdzakelijk op de onderstelling, dat de trawlers alsdan de vischgronden, alwaar voornamelijk kleine visschen gevangen worden, van zelf zullen mijden, aangezien het de moeite niet loonen zou, visch te vangen, die toch niet verkoopbaar is.”³⁵²

The fishers's means of dealing with a declining cod stock

The Dutch fishers seemed to find their own way around the decline in fish stock on their traditional fishing banks. In the mid-1890s, the *beugvisserij* voluntarily took up the unofficially combined cod and herring fishery practised during the French occupation at the beginning of the century, as the French suspended single species herring fishing. Now, the fishers deliberately fished for herring as bait, salting any spare herring as *pekelharing*, acknowledging cod's ability to trace herring to what the fishers considered their usual fishing banks in the North Sea. Some fishers resumed cod fishing near Iceland, which had not been part of Dutch fishing business since liberalization. Yet, others quit their traditional fishing off the coast of Egmond-aan-Zee and Nieuwediep, because of extirpation of fish, and because of silting or pollution from the new fishing port IJmuiden.

³⁵² Verslag van den Staat der Nederlandsche Zeevisscherijen over 1893 p.56-57



³⁵³ The vessels fishing near Iceland came from Maassluis, Vlaardingen, Pernis, Zwartewaal and Middelharnis. They made one trip to Iceland and salted all the cod caught during spring and summer and obtained financial support of 500 *guilder* per year from the state. If quitting cod fishing near Iceland to fish for herring instead a reduction in support of 1-200 *guilder*. In 1836, support for herring fishing augmented, and it seems the Iceland cod fishers reacted like their North Sea colleagues switching to herring. At this time, it was not a matter if a good catch, but if a good income. As the ship owner P. L. Slis from Middelharnis predicted in 1854, fresh fish and fresh cod had become the most sought after. Fishing moved from the traditional hometowns up the river Maas to coastal towns, implying a change in type of vessel as the only actual coastal port was IJmuiden. The revolutionary *logger* vessel of the 1860s had a strong competitor in the consistently successful *bom* vessel, which had evolved into a bigger and more seaworthy vessel by the second half of the 1800s. In 1900, Dutch fishing business registered 298 *bom* vessels, 286 *loggers* and 24 steam trawlers. It implied a slow change from wooden vessels to steel; compared to shipping business or the marine. It also implied less salted fish and a change in salting methods from barrels of fish, to fish kept directly in the hold of the new vessels.³⁵⁴ The Dutch coast was no longer just a harsh place for fishers's living, it had

³⁵³ Nationaal Archief den Haag, toegang no.3.11.05 inv.1-2 on the Iceland fishing and *Verslag van den Staat der Nederlandsche Zeevisserijen* over 1894 p.86-89,107, 1896 p.93

³⁵⁴ *Verslag van den Staat der Nederlandsche Zeevisserijen* over 1900 p.1,15 and Baetens, Bosscher, and Reuchlin ed.; *Maritieme geschiedenis der Nederlanden*; vol.4 p.272-297 and Kranenburg Boelman H. A.; *Visserij en visserijhavens*; De Economist; 1957, vol.105, p.494-519 and Engel Jan de Boer, Meulen Cees

become a desirable destination for tourists who favoured fresh fish and who were willing to pay for what the English called prime fish.³⁵⁵ Only Scheveningen maintained its fishing community by the end of the 1800s, in spite of having no port. The storm in December 1894, destroying most of the coastal fishing fleet on the beach, initiated an admirable national emergency aid. It also accelerated progress within the business accepting telegraphy and the steam winch for drawing in the nets and trawl. It even facilitated access of small vessels to IJmuiden, the new port on the coast, by removing the hitherto mandatory fee *havengeld*.³⁵⁶ In 1899 came a law curtailing the selling of fish to the fish markets making any selling from the vessel illegal.³⁵⁷ The College disagreed with the decision recommending that fresh fish was sold when landed, rather than waiting for the market to open. Many people engaged in buying and selling of fish, and were affected by the law, including the ship owners acting as *boekhouders*, keeping the records of the vessels holding the catch, the earnings, the wages, the maintenance and the eventual profit. They made sure they had their share, like any fish market in 1899.³⁵⁸ By the turn of the century, the Dutch experienced a series of episodes of historical importance to the country. In 1887, men at 23, showing signs of some prosperity, acquired the right to vote. The Christian politicians benefitted from the votes, as did one socialist, Domela. They passed a law on education allowing free schools to include Christian schools, and a labour act on women and children's work in 1889, protecting the defenceless. In 1892-93, the liberals reformed the fiscal legislation of 1806 by taking the very first steps of redistribution of income by taxation.³⁵⁹ Politics reflected an institutionally mature nation managing the social transformation of industrialisation by means of organisational and religious tradition; avoiding uprising and revolution happening in other European countries.

Establishing the International Committee for the Exploration of the Seas

Similarly, solutions were sought by democratic means. Disappointed by the failure of the National Sea Fisheries Protection Association's international conferences to solve their mutual problems, a conference was held in June 1899 by a group of Norwegian and Swedish scientists in cooperation with the Swedish king. Representatives from the Scandinavian countries and Germany participated; only at the last minute did countries

van der; Een Schip Vis, Onze Noordzeevervisserij in woord en beeld; De Boer Maritiem; 1976, p.7-33,99-101 and Poot J.; De oorzaken van het verval van de haringvisserij te Vlaardingen; Mens en maatschappij; vol.27, p.239-252,318-324, 1952 and Nieuwenhuize Hielke; Schuiltje varen. De opkomst van de Scheveningse visserij (1870-1904) en de ontwikkeling van de bomschuit; NETwerk, 2005, nr.16, p.23-37

³⁵⁵ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1895 p.28 and Vermaas J.C.; Geschiedenis van Scheveningen; p.140-173,346-387

³⁵⁶ Verslag van den Staat der Nederlandsche Zeevisscherijen over 1895 p.17,34,154, 1896 p.90-91

³⁵⁷ Law of 25.03.1899 nb.85 Verslag van den Staat der Nederlandsche Zeevisscherijen over 1898 p.22-26

³⁵⁸ Vermaas J.C.; Geschiedenis van Scheveningen; chap.5

³⁵⁹ Kossmann E. H.; The Low Countries 1780-1940; p.344-361

bordering the North Sea, like the Netherlands receive invitations.³⁶⁰ Hoek went to Stockholm as a representative of the Dutch. Unlike the report to the *College* (on the scientific trawl surveys in the North Sea) Hoek's report to the *Minister van Waterstaat, Handel en Nijverheid* on the Stockholm conference was diplomatic. He listed the delegates from each country, and he mentioned receiving a Swedish agenda prior to the conference, and a German agenda at the meeting, but he had no comments on discrepancies.³⁶¹ The scientific topic was split into two groups, Hoek choosing the second group on biology and professional fishing rather than the first group on hydrographs, chemistry, microscopy, and meteorology. During the conference, the groups aimed at drawing up programmes for further investigation throughout the countries. The delegates also set up a third group coordinating the continuation of the investigations, administering the interrelationship with the governments who were to be the official part of the future organisation. Everyone agreed on the objective of the conference, but not everybody agreed on the outcome of the working groups. The Scandinavian scientists' preferences lay in the first group that had its work well laid out by the end of the conference, but the members of the second group were mixed in all aspects and Hoek made a note saying more time and preparation were needed while different points of view were not yet ripe for discussion. According to the agenda the second group must consider how egg and larvae from fish of interest, among these cod, spread vertically and horizontally, what happened to the juveniles and to the spawning stock, where they spawn and what they eat, fluctuations in stock and estimate of stock or biomass. The group must also consider the known fishing grounds, drawing a map and keeping statistics on catch and species, size, weight, and condition; a similar approach to the Garland statistics from Scotland. The number of vessels and fishers fishing, should be recorded, emphasizing gear aimed at specific species avoiding bi-catch.³⁶² The disagreement was already evident at the time: was it man and his change in fishing methods or was it nature, the fish and perhaps its migration that caused the declining catch rates?³⁶³

Excluding fishers from fisheries' management

³⁶⁰ Smed John, Ramster John; Overfishing, science, and politics: the background in the 1890s to the foundation of the International Council for the Exploration of the Seas; ICES Marine Science Symposia, 100 Years of Science under ICES, A Symposium held in Helsinki 1-4 August 2000; vol.215, p.13-21, 2002

³⁶¹ The Netherlands and Russia one delegate each, Denmark, United Kingdom and Norway three each, Germany four and Sweden six delegates, see Hoek P. P. C.; Internationale Conferentie voor het onderzoek der zee gehouden te Stockholm in Juni 1899, Rapport uitgebracht aan Zijne Excellentie den Minister van Waterstaat, Handel en Nijverheid; Nederlandsche Staatscourant, nr.235, 1899

³⁶² Hoek; Internationale Conferentie; 1899

³⁶³ Smed, Ramster; Overfishing, science, and politics; ICES Marine Science Symposia and Ulltang Øyvind; Realizing the basis for overfishing and quantifying fish population dynamics; ICES Marine Science Symposia, 100 Years of Science under ICES, A Symposium held in Helsinki 1-4 August 2000; vol.215, p.443-452, 2002

The Netherlands found itself in a dilemma. By remaining loyal to its liberal politics, the country joined the second industrial revolution in the 1890s and came up to the standards of its neighbouring countries in for example technical, chemical or electrical industries. When participating in the international conferences for the exploration of the sea though, the country realized it had been mistaken in sympathising with the English (liberal) fishing politics. Hoeks mandatory contributions to the *Verslag van den Staat der Nederlandsche Zeevisserijen* suddenly held no information on the second conference in Christiania [now Oslo] in May 1901 - elaborating on the contents of the second group on biology and fishing – and no arguments on constituting the permanent central bureau in Copenhagen by July 1902. The *Verslag* only briefly mentioned Hoek engaging as secretary in Denmark, and his son-in-law, Redeke taking over his position as scientific advisor in the Netherlands.³⁶⁴ The contrast to previous debates on fishing issues in the *Verslag* was remarkable. It was as if the engagement in ICES paralyzed the *College*. The *College* was the agency to Dutch fishing business and the *Verslag* the mouthpiece of the different parts involved in fishing. When engaging in ICES, the countries committed themselves to certain surveys and measurements in coordination with the fellow participants. By separating current (national) issues on fishing such as biology from fishers's catch data and practical experiences, the *Verslag* became a tedious administrative report lacking relevance. More importantly and with tragic consequences, it seemed the *College* had had its day as a consultative agency between the local fishers and the national institutions. Hoek informed the *College* about the conferences, but he did not say anything about the fisheries' related scientific content of the meetings as if he wanted to hide his sympathy with the English, his cooperation with the Germans or any disagreement with the Scandinavians. He pleaded for support from the *College*: for the participation in ICES and for improvements to the Dutch *visserijonderzoek*. It seemed a setup for himself and his son-in-law rather than a genuine desire for advancing marine sciences and cod fishing in the North Sea.³⁶⁵ Some scientists like the Scottish Garstang co-operated with the fishers, and their results obtained such recognition they became role models for the first research in ICES. Hoek did not belong to this group. Heading for the 1900s, Dutch cod fishing lost its connections to the national institutional organs with decisive power and the historical reminiscence of national importance. Meanwhile, there were few cod in the sea. The *schrobnets* fishers along the

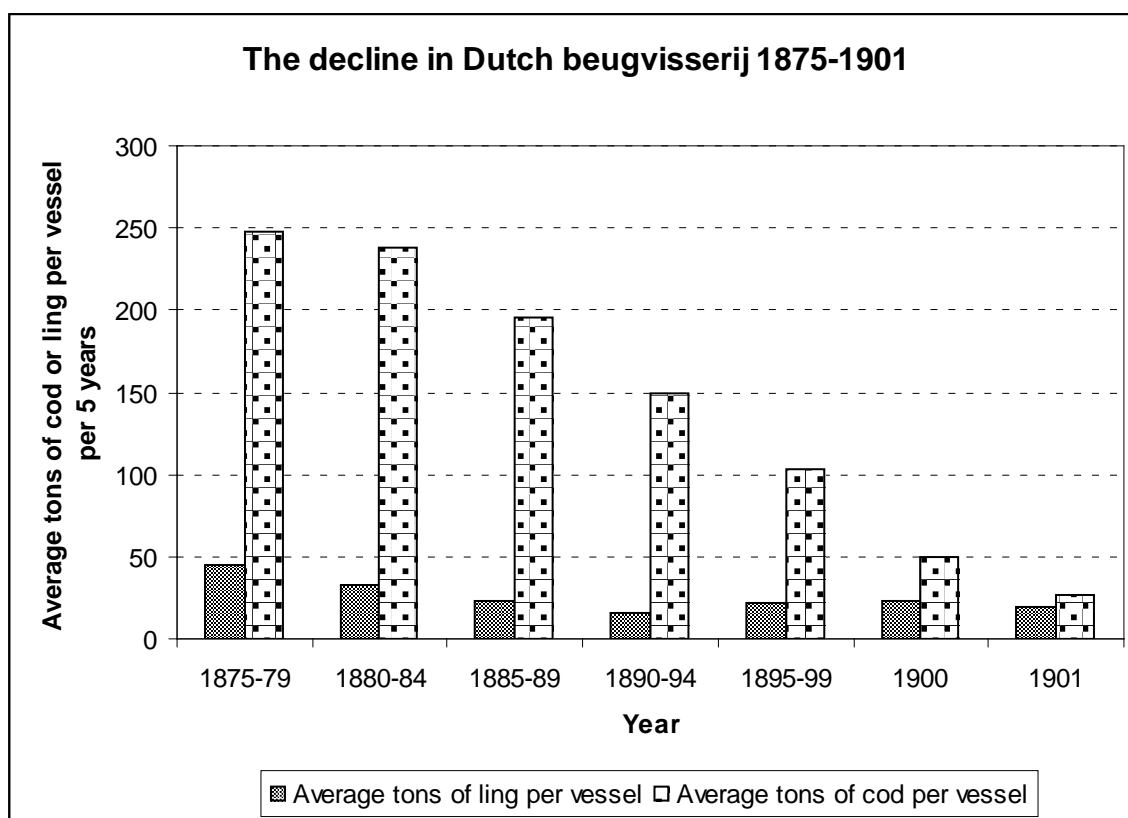
³⁶⁴ Rather, the College pointed to the fact that it was not responsible for the content of Hoeks *Mededeelingen over Visscherij - Maandblad*. *Verslag van den Staat der Nederlandsche Zeevisserijen over 1900*: p.14, 1901 p.7,16, 1902 p.4-5.13 and Svansson Artur; Otto Petterson and the birth of ICES; ICES Cooperative Research Report; no.260, p.41-44, 2003

³⁶⁵ Hoek P.P.C.; *Internationaal Onderzoek van de Noordzee enz.*; aan het College van de Zeevisserijen; Helder 12-12/1899, nr.441 and Bennekom A. Johan van, Groot Sebastiaan J. de, Otto Leo; Dutch involvement in fisheries research prior to and in early ICES; ICES Marine Science Symposia; vol.215, August 2002, 100 Years of Science under ICES, p.56-63

coast gave up and converted to shellfish, bivalves and lobster fishing or herring; all increasing as cod declined. The *beugvisserij* witnessed irregular results and the *College* made a sad comment on behalf of the fishers:

“Vergelijk men deze cijfers... met die van de laatste 25 jaaren, dan ziet men dat met elk opvolgend vijfjarig tijdvak de vangst, vooral van kabeljauw, verminderde en rijst de vraag of de groote uitbreiding van de stoomtrawlvisserij niet de oorzaak is, dat de kabeljauw op de vroeger zoo rijke vischgronden van de Noordzee hoe langer hoe schaarscher wordt. Reeds langen tijd wordt dit door onze beugvischers als hunne overtuiging uitgesproken, daar naar hunne mening de jonge visch er niet meer het noodige voedsel vindt om tot wasdom te komen.

*In den hieronder volgende staat springs de sterke vermindering van de vangst duidelijk in het oog.”*³⁶⁶



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Herring fishery continued its profitability till the 1920s, then the happy days were over. Industrialization was ready to take over when seasonal fishing business became history.³⁶⁸

³⁶⁶ Verslag van den Staat der Nederlandsche Zeevisserijen over 1901; p.138-152,156

³⁶⁷ Verslag van den Staat der Nederlandsche Zeevisserijen over 1901; p.138-152,156 on the declining catch data on cod mentioned

³⁶⁸ Poot J.; *De oorzaken van het verval van de haringvisserij te Vlaardingen*; 1952

Dutch cod fishers in the 1800s

The history of Dutch cod fishing in the 1800s is an example of how the institutional framework within which they had to operate had an impact on fishing, yet it is also an example of the persistence of the fishers's own operational rules.³⁶⁹ Ship owners owning fishing vessels mostly ran family businesses and though the local, organizational affiliation applied to fishing dissolved in many respects as fishing liberalized, the family businesses in towns along the Maas river remained intact, facing more competition from limited companies and foreign companies. The freedom of trade and the way in which external factors made new markets more accessible caused change. The consequences of change in Dutch cod fishing tested both the solidarity within the family business and the responsibility towards the fish stock. Many ship owners in the 1800s ran the business run by their fathers and their grandfathers passing it on to their sons. Historians' persistent perception of impediment to growth in the Netherlands in the 1800s because of this continuation caused colleague academics to question its validity. Maybe growth existed, and maybe continuation was beneficial?³⁷⁰ One such case study concerns the business structure of herring fishery in the 1800s and its relation to continuation and growth.³⁷¹ I shall pick up the thread but in relation to cod fishing – questioning the sources.³⁷²

Dutch cod fishing and family business

The Kikkert family business

Pieter Kikkert was the man who initiated the request for financial support to cod fishing in the North Sea in 1816, being responsible for the records of the *Kollegie van de Ijslandse Kabeljaauwvisserij*.³⁷³ He had come to Vlaardingen from Leiden in 1809 along with his wife

³⁶⁹ Ostrom, Gardner, Walker; *Rules, Games & Common-Pool Resources*; chap.2 See **The Institutional Analysis and Development Framework and the arguments** for an explanation on the different rules

³⁷⁰ Zanden J.L. van; *Industrialization in The Netherlands*; chap.4, The Industrial Revolution in National Context, Europe and the USA; Cambridge University Press 1996 and Griffith; Industrial retardation; p.8-9, 189

³⁷¹ Pons Gerrit; *De bakens verzet. Een analyse van de Hollandse pekelharingvisserij met kielschepen in de periode 1814-1885*; Proefschrift, Universiteit Utrecht, 16/12-1996

³⁷² Part of this chapter is a rewrite of Overgaard Christine; *The Survival of the Dutch Cod Fishery: The Benefits of a Family Business*; Fisheries and Fish Processing as Industrial Heritage, Proceedings of the 10th Conference of the North Atlantic Fisheries History Association Bremerhaven, August 7-11, 2006, [offprint] *Studia Atlantica*, 10, p.49-56

³⁷³ Nationaal Archief 3.11.05 inv.40-41 and Voort Jan P van de; *Het wel en wee van een Vlaardingse koopman-reder tijdens de Belgische Opstand: het dagboek van Hendrik Kikkert, 1830-1837*; Netwerk, Jaarboek Visserijmuseum Vlaardingen, 1997, vol.8, p.38-74 and Pieter Kikkert 16.09.1775-27.11.1855 ~ Catharina Johanna Heijblom 07.06.1777-14.09.1840 Stadsarchief Vlaardingen, ISIS

and settled as a debt collector and bookkeeper specifically at the *rederij Hoogendijk, Betz & De Willigen*.³⁷⁴ He did not own a vessel and had no direct interest in the financial support, but being a bookkeeper to several ship owners; he indirectly knew about and had an interest in the ramifications of their business. He considered the financial initiative a positive gesture towards the ship owners, and felt obliged to work as secretary to the *Kollegie* from its foundation in 1817 to its dissolution in 1853. He became the interface between the authorities and the ship owners when applying for support and receiving the money. Interestingly, he combined his bookkeeping and his secretarial work allowing ship owners certain credit for rigging their vessels for fishing within the limit of the presumed support, paying the ship owners the difference once the support was granted.³⁷⁵ Hence, all support granted by the king went to the ship owners; not the fishers.

³⁷⁴ Voort J.P.van de; *De Rederijen en Handelsmaatschappijen Hoogendijk en de Doggermaatschappijen in de Jaren 1745-1975*; chap.II.2, Vlaardingen 1975 Pieter Kikkert had a pretty good annual salary, first 1000, then 1500 *guilder* Manon Y Plaatzer mentions Pieter Kikkert's work as bookkeeper in her master thesis: *Firma Hoogendijk, Betz & de Willigen, Rederij in de Franse tijd, 1809-1812*; MA Scriptie, Maritieme Geschiedenis, Universiteit Leiden, 2009

³⁷⁵ Nationaal Archief 3.11.05 inv.40-41



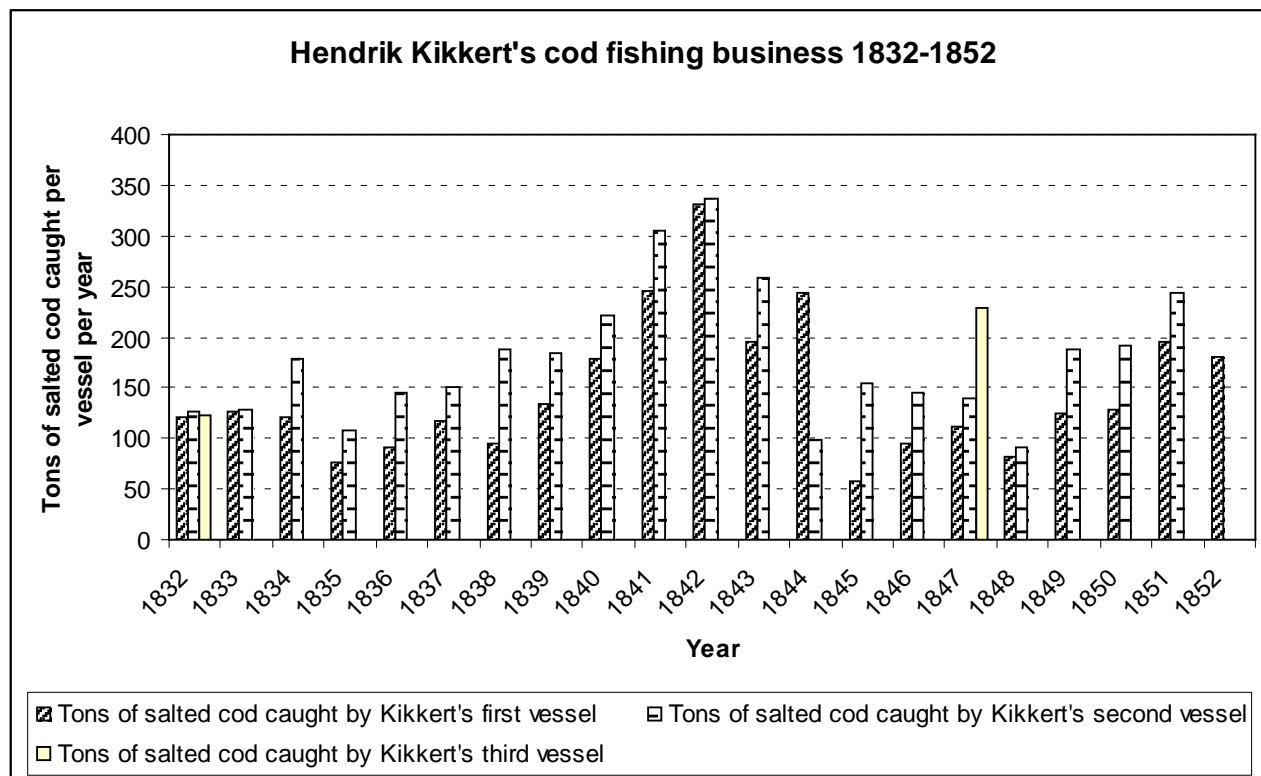
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Being a “foreigner” in Vlaardingen, Kikkert was aware his position depended on his professional performance. Even his children felt like foreigners, and though Pieter Kikkert’s oldest son, Hendrik Kikkert became a trader, a debt collector, a poor man’s advocate, a ship owner and the vice-consul to Spain he struggled for acceptance in the local environment in Vlaardingen.³⁷⁷ He married into one of the well-established shipping families in Vlaardingen, the Dorsmans, and had ten children. He primarily sold herring and cod to Belgium, improvising during the secession in the 1830s “exporting” via Dunkerque. Hendrik Kikkert started his engagement as ship owner in 1831 buying one vessel for

³⁷⁶ P5297 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Pieter Kikkert (Leiden 16-9-1775 – Vlaardingen 27-11-1855) [Gehuwd met Catharina Johanna Heijblom (7-6-1777)]

³⁷⁷ Nationaal Archief 3.11.05 inv.31 p.871-72 dialogue between father and son on conditions in cod fishing and Hendrik Kikkert 24.09.1798-05.09.1863 ~ Cornelia Dorsman 22.03.1800-29.12.1875 It was not uncommon for ship owners from Vlaardingen to marry daughters of ship owners from neighbouring towns like Maassluis, Schiedam or Delft, nor was it uncommon for ship owners from these towns to move to Vlaardingen and set up business

herring, rigging it for cod fishing in 1832. In spite of a tragic loss of a second vessel that year, he sent off two vessels fishing for cod from 1833-1852, maybe longer.



³⁷⁸ Seamen, mates or skippers on the vessels fishing for cod at Kikkerts 1832-1852

1833 -1834 ? sailed *Nijdere Visscherij*

1834 Frans Ommering sailed *Nijdere Visscherij* (and wrecked)

1832-1833 ? sailed *Volharding*

1833-1834 Hermanus Schouten sailed *Volharding*

1835-1837 Hermanus Schouten sailed *Vlaardingen Welvaren*

1838-1845 Hermanus Schouten sailed *Dankbaarheid*

1846-1852 Hermanus Schouten sailed *Toekomst*

1835-1837 Leendert Schouten sailed *Volharding*

1838-1844 Leendert Schouten sailed *Vlaardingen Welvaren*

1846-1852 Leendert Schouten sailed *Dankbaarheid*

1852 Pieter Strijbos sailed *Welkom*

Hendrik Kikkert wrote in his diary that he tried to engage partners in buying the first vessel for herring, but with little luck, so in 1831 he bought one on his own, and as shown, he already had three vessels fishing for cod in 1832. The Kikkert family showed it was

³⁷⁸ Voort Jan P van de; *Het wel en wee van een Vlaardingse koopman-reder*; p.67-68 and Nationaal Archief toegang no.3.11.05 inv.1-2 on the number of vessels fishing for cod owned by Hendrik Kikkert, holds records on cod fishing from 1817-1853 limiting the information on vessels fishing for cod to the first half of the 1800s and Stadsarchief Vlaardingen ISIS on the seamen, mates and skippers

possible to enter the local business network. Hendrik Kikkert also made a comment in his diary on the future prospect of the family business:

*"Daar ik voor alle mijne menigvuldige bezigheden geheel alleen sta, had ik reeds lange gewenscht eenige hulp daar in te hebben. Mijn vader, en mijne broeder Paulus, helpen mij nu en dan daarin, voor eene matige belooning, maar tot meerder gemak en gerustheid, is mij zeer nodig, iemand die ik volkomen kan vertrouwen, die eenige bekvaamheid bezit, en die steeds ter zijde is. – Had ik geene kinderen, dan zou ik rees lang hebben rondgezien naar een vaste kantoorbediende, doch nu ik twee zoontjes heb, wil ik beproeven om het zoo lange rondteschieten, tot dat een van hun mij genoegzaam kan helpen. – Ik heb daartoe reeds in Meij van 't vorig jaar, Pieter (toen 7 jaren oud) bij mij op het kantoor genomen, en onderwijs hem zagties aan in alles wat hem in 't vervolg kan dienstig zijn om in hetzelfde vak als ik, zijn bestaan te vinden, dit is, van veele zijden beschoud, voor mij en voor Pieter het verkieschlijkste vooral dar ik bespeur, dat hij, hoe jong dan ook, wel leerzaam is, en ik nu reeds, veel nut en gemak van hem begin te krijgen, hetwelk, jaarlijks kan toenemen en alzoo voor mij, voor mijne vrouw, en voor den knaap zelve, in de gevolgen van het grootste belang kan worden. Dus verre ben ik over dezen maatregel zeer tevreeden."*³⁷⁹

Hendrik chose not to become a bookkeeper, like his father, but his oldest son Pieter Kikkert became a mercantile bookkeeper, a trader, a ship owner, a maritime merchant and a local debt collector. Pieter Kikkert would have succeeded his grandfather as secretary to the *Kollegie* had it not been dissolved by the liberal government in 1853. Instead, he kept his grandfather's records from the *Kollegie* at his request as evidence of an important, local organ. Pieter owned fishing vessels and ran the business, selling herring and cod as well. After him, his son Huibrecht Kikkert and then his granddaughter Adriana Kikkert continued the business into the 1900s.³⁸⁰

³⁷⁹ Voort Jan P van de; *Het wel en wee van een Vlaardingse koopman-reder*; p.68

³⁸⁰ *Adriana Kikkert †*; Tijdschrift De visscherij; 1925-1926, vol.6, p.106



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Fishing being one among several occupations within the family business

Vlaardingen was one of the towns sending vessels to sea fishing for cod during the first half of the 1800s. During the period 1818-1852, there were 73 ship owners and 10 partnerships (such as father and son) applying for financial support for vessels fishing for cod.³⁸² Like other aspects of fishing, the common ownership originated from the Golden Period and was a shared ownership called *partenrederij* in which shares consisted of material goods as well as financial inputs. This kind of ownership spread the risk of each vessel, enabling people of different professions to have shares. By the 1800s, few skippers in Vlaardingen fished for cod at sea in vessels they owned themselves. It was different in the coastal towns, and the difference became important later in the century.

³⁸¹ P0286 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Pieter Kikkert (Vlaardingen 24-2-1825 – Vlaardingen 19-5-1889) Gehuwd met Maartje den Boer (18-5-1826)

³⁸² Most of the ship owners and fishers from Vlaardingen are traceable in genealogical records via the internet. The Vlaardingen records are not representative to the Dutch fishing towns, but they are interesting nevertheless because of their role in the history of cod fishing

Every ship owner in Vlaardingen had sidelines, frequently as ship builder, ship architect, cooper, sail maker or block maker. Almost all ship owners had sidelines as traders and quite a few were bookkeepers or rentiers. Shares in vessels were held by bakers or tailors or preachers, medical doctors or members of the municipal council in Vlaardingen. Sometimes, shipping became the sideline showing the interactive role of cod fishing in the community. The reason was the business structure and the interrelationship between families in Vlaardingen.

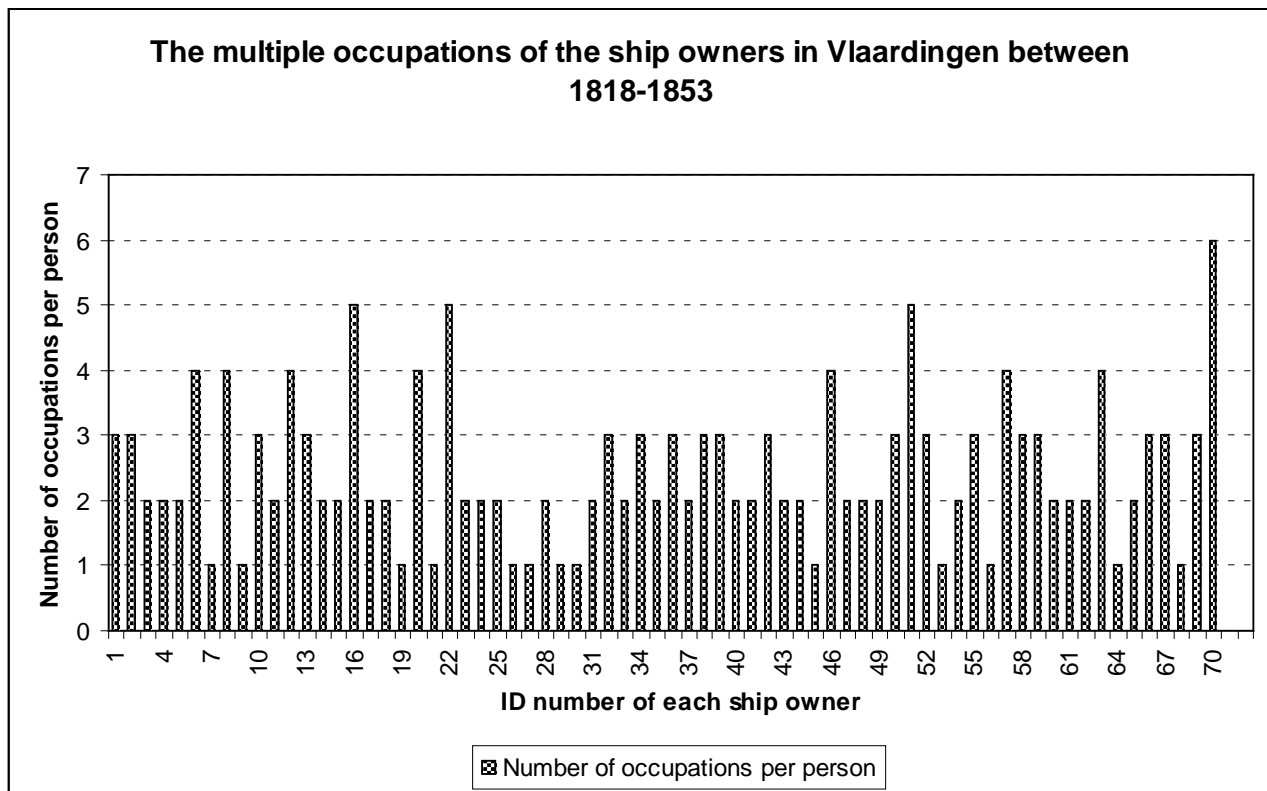
The structure of family business in fishing

In *partenrederij*, the shares need not be of equal size, there were shares of 1/32, 1/16, 1/8, 1/4, 1/2 or the total value of the vessel, depending on the means and importance of the shareholder, enabling different shareholders. A 1/16 share might equal a lot of rope or similar goods for rigging. The shared ownership system spread the risk and the rewards. The general definition of a family business requires the inclusion of kinship as well as ownership and control within the business.³⁸³ In cod fishing, ownership was common as the ship owner owned the biggest amount of shares and kinship was common as son succeeded father, and younger brothers supplied goods or upkeep for the vessel. Whether or not the owner had control depends on the perception of control, and therefore on the location of fishing at sea or near the coast. If the ship owner was no longer the skipper himself, controlling the vessel when fishing, this raises the question who was in control of the business. In coastal cod fishing the owner of the *bom* vessel was in most cases also the skipper of the vessel. In cod fishing at sea, if the owner had become a trader and maybe a bookkeeper deciding on the investments and the buying and selling of the fish; was he then in control of the business? Following the debate on transition of management to foreign people, the answer is no. This idea considers transition part of progress towards the maximum productivity and profitability, while disregarding family business compatible with growth, causing a revaluation of continuation and growth and the role of family in business. Opponents to the idea allow for a more flexible perception of control, emphasizing the importance of external factors to family business like social networks and geographical and institutional frameworks.³⁸⁴ I supply the ship owners' strategies and decisions within Dutch cod fishing business as examples of this flexible perception. I emphasize my argument with the fact that the skippers matched the ship owners' flexibility; sometimes skippers from one family stayed at the same ship owner's, sometimes they

³⁸³ Sluyterman Keetie E., Winkelman Hélène J. M.; The Dutch Family Firm Confronted with Chandler's Dynamics of Industrial Capitalism, 1890-1940; Business History, 1993, nr.35, vol.4, p.152-183 and Davids Karel; Familiebedrijven, familisme en individualisering Nederland ca 1880-1990, Een bijdrage aan de theorievorming; Amsterdams Sociologisch Tijdschrift, vol.24, p.527-554 and Arnoldus Doreen; Family, Family Firm, and Strategy, Six Dutch family firms in the food industry 1880-1970; aksant 2002 p.15-30

³⁸⁴ Rose Mary B, Jones Geoffrey; Family Capitalism; Business History, 1993, nr.35, vol.4 p.1-16

signed on for short intervals at different owners.³⁸⁵ There seems to have been a general strategy within the (cod) fishing business and within the families in Vlaardingen: the ship owners deliberately had multiple occupations.



³⁸⁶ Seventy-three ship owners of one or more vessels fishing for cod some time during the period 1818-1853 from Vlaardingen are included in this graph. Their first occupation here is their ownership; the second is most often trading salted herring and fish (cod) and other goods with Spain and Portugal for salt and tar and maybe wine and fruits. A third occupation could be book keeping or a skilled trade with relation to fishing like sail maker or rope maker. Often the third occupation was simply living of personal means. The fourth occupation could be political engagement in the municipal council, or societal engagement concerned with the relatives to lost fishers. Fifth or sixth occupation could be engagement in societies with relation to the local community, some sort of service or protection of the civilians or the municipality. The number may be higher even so, as these occupations correspond with the ones registered in the archival material, but as is often the case, not everything was registered. One reason was the necessity of having a supplementary source of income to cod fishing, engaging within a range of occupations with a reference

³⁸⁵ See Appendix 34b note 384 on the amount of years a skipper stayed at a vessel of one owner and Uzzi Brian; *The Sources and Consequences of Embeddedness for the Economic Performance of Organizations: The Network Effect*; American Sociological Review, 27/3-2000 on the importance of combining short and long term relations

³⁸⁶ Nationaal Archief toegang no.3.11.05 inv.1-2 and Stadsarchief Vlaardingen ISIS on the number of occupations per ship owner

to fishing business, to the extent of keeping part of expenses on rigging the vessel within the business. Another reason was that the ship owners engaged in the physical labour of fishing when young and fit, earning money and gaining experience, seemingly becoming independent ship owners later in life when their fathers approached retirement and when they earned sufficient money themselves to own shares in vessels and run a *rederij*. Usually, each family specialised in a particular craft or administrative role like coopers or bookkeepers. The sons most likely engaged in the same occupation as their fathers, maybe they added a new one if convenient and one son, usually the oldest, became ship owner. Thereby they secured their future income while manifesting the family's position in fishing business locally. The younger brothers might hold shares in vessels, but they did not seem to engage as independent ship owners. They engaged in occupations of their own choice, leading to shareholders of vessels being professionals such as lawyers or doctors or priests. The daughters of the ship owners married sons of colleagues. There was an impressive interrelationship among the ship owners of Vlaardingen. Marriage may have been a way of keeping good (business) relations. The ship owners did not disparage the women. The speed of re-marriage in case of death in childbirth or death at sea indicated the importance of the family, and the frequency with which widows took over business expanded their role into family business. 20% of the ship owners in Vlaardingen fishing for cod between 1818-1852 left their business to their widows, who formally ran them until their death when the business closed. The remaining 80% closed when the ship owner died; the son did not "take over" the business, instead he ran his own. Closing business meant selling the vessel, dividing the assets or more likely the bequests among the participants and the family members. The family business and the structure of the *partenrederij* allowed for this distribution of the capital.

The De Zeeuw family business

The ship owners

One of the family businesses in Vlaardingen belonged to the De Zeeuw.³⁸⁷ Dirk de Zeeuw was the owner of vessels and a fishing business in Vlaardingen. He was also a trader, a ship's carpenter and the boss at a shipyard.³⁸⁸ In many ways, Dirk de Zeeuw was an

³⁸⁷ Brugge J.P. ter; De geslachten De Zeeuw te Vlaardingen; Vlaardingen 2004, Geslachtsregister De Zeeuw I, Vla

³⁸⁸ The records at Stadsarchief Vlaardingen call(ed) the De Zeeuw company *Rederij de Hoop*, but *Rederij de Hoop* is a different company in the Nationaal Archief 3.11.5 inv.1-2 and in the Naamliste der Boekhouders, Schepen en Stuurlieden and Gerrit Pons describes the de Zeeuw along with other fishing businesses fishing for herring and cod. Unfortunately, Pons was not aware of the archival material on cod fishing at the Nationaal Archief, see Appendix 4 note 44 and 388 and 398 and 402

active man; he and his wife Neeltje Drop had ten children, five who died as youngsters, leaving two sons and three daughters.³⁸⁹ Dirk's father, Cornelis de Zeeuw, was a shipbuilder. Cornelis married Johanna Versendaal, the daughter of a ship owner and sail maker, Job Versendaal.³⁹⁰ Job was head of the Vlaardingen orphanage as well, which was more than a home to orphan children. It provided maritime navigational education to young boys who lost their fathers and mentors in life, securing the boys the opportunity to become fishers – and the ship owners the availability of a well qualified work force.³⁹¹ The support for the orphanage came out of mutual solidarity and necessity, while everyone engaged in fishing paid a set percentage of their income to a local fund, supporting fishers's widows, children and elderly fishers. Dirk de Zeeuw's father in law Hendrik Drop was a baker and a *rentier*, a person capable of living from savings.³⁹² Hendrik married Aletta Wilmart, and together they had four daughters, one of whom was Neeltje. *Rederij de Zeeuw* usually had two vessels fishing for cod at a time. In 1818, it was *Wisselvalligheid* and *Gelukkige Verandering*. After this year, *Wisselvalligheid* went fishing for herring. From 1819-1836, *Vrouw Neeltje* accompanied *Gelukkige Verandering* fishing for cod. Unfortunately, *Gelukkige Verandering* wrecked in 1836, on its first seasonal trip to the North Sea for cod, and it never went fishing again. *Jonge Aletta* then went along with *Vrouw Neeltje* from 1837-1841, and with *Jonge Dirk* from 1841-1852. Dirk de Zeeuw died in 1830, and his widow Neeltje Drop ran the business thereafter.³⁹³ She reported the annual catch of cod and the by-catch of ling when applying for financial support from the king via the *Kollegie*.

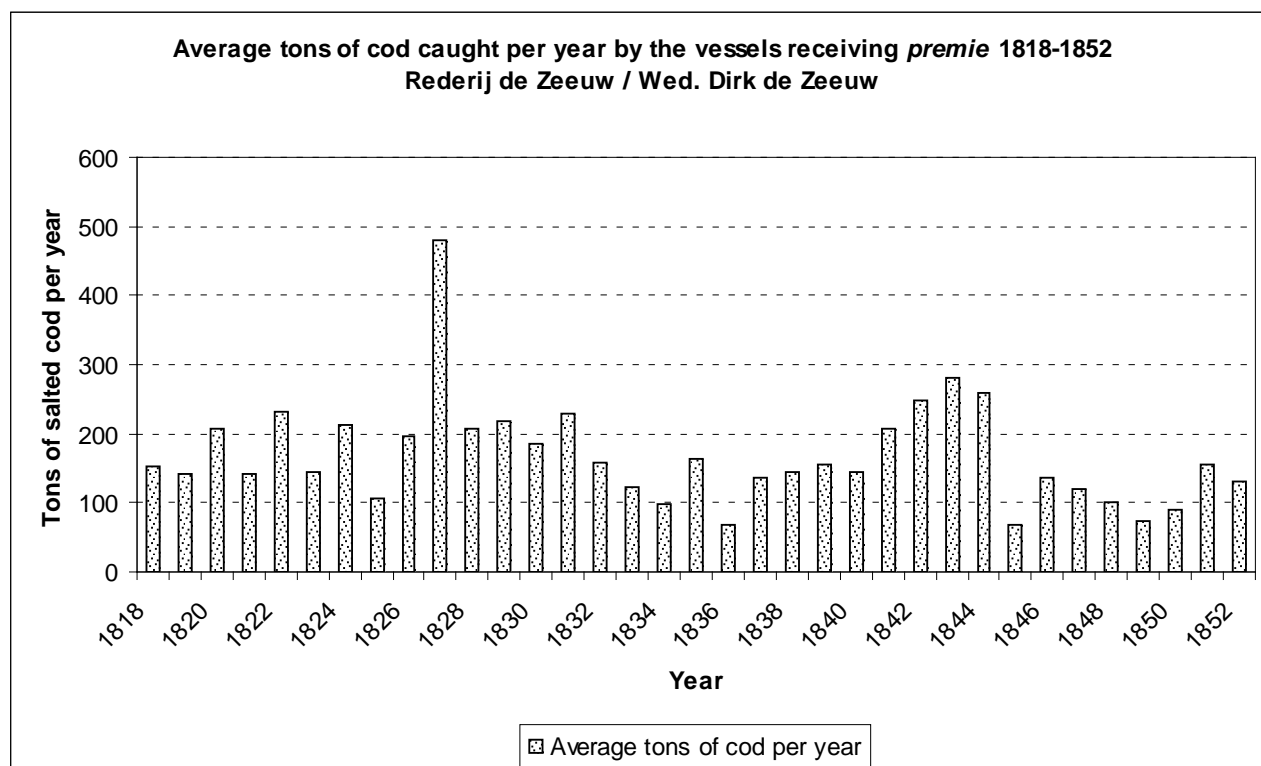
³⁸⁹ Dirk de Zeeuw 05.1773-05.1830 ~ Neeltje Drop 06.1777-11.1855 according to Stadsarchief Vlaardingen, Internet Studiezaal Informatie Systeem, ISIS

³⁹⁰ Cornelis de Zeeuw 07.1740-10.1812 ~ Johanna Versendaal 12.1740-08.1794. Stadsarchief Vlaardingen, ISIS

³⁹¹ Davids C. A., Het zeevaartkundig onderwijs voor de koopvaardij in Nederland tussen 1795 en 1875. De rol van het Rijk, de lagere overheid en het particuliere initiatief, Tijdschrift voor Zeegeschiedenis, Symposiumnummer, december 1985, 4, 164-190

³⁹² Hendrik Drop 09.1736-01.1826 ~ Aletta Wilmart ..-02.1814, Stadsarchief Vlaardingen, ISIS

³⁹³ In the archival material Neeltje Drop is registered as "Wed. Dirk de Zeeuw"



³⁹⁴ In 1818, the vessels *Wisselvalligheid* and *Gelukkige Verandering* each received the annual *premie* of 500 guilder. From 1819-1835, *Gelukkige Verandering* and *Vrouw Neeltje* received *premie*, from 1837-1841, *Vrouw Neeltje* and *Jonge Aletta* received *premie*, and from 1842-1852 *Jonge Aletta* only. From 1832-1852 another vessel, *Jonge Dirk* went along fishing for cod, but it did not apply for or receive any *premie*, therefore its catch is not included in the graph. Seamen, mates or skippers on the vessels fishing for cod at de Zeeuws 1818-1852

1818-1831 Cornelis van der Windt sailed *Gelukkige Verandering*

1832-1837 Cornelis van der Windt sailed *Jonge Dirk*

1838-1849 Gerardus van der Windt sailed *Jonge Dirk*

1832-1836 Abraham van der Windt sailed *Gelukkige Verandering*

1837-1852 Abraham van der Windt sailed *Jonge Aletta*

1818-1819 Cornelis Rijke sailed *Wisselvalligheid*

1820-1841 Cornelis Rijke sailed *Vrouw Neeltje*

1850-1853 Pieter Ommering sailed *Jonge Dirk*.

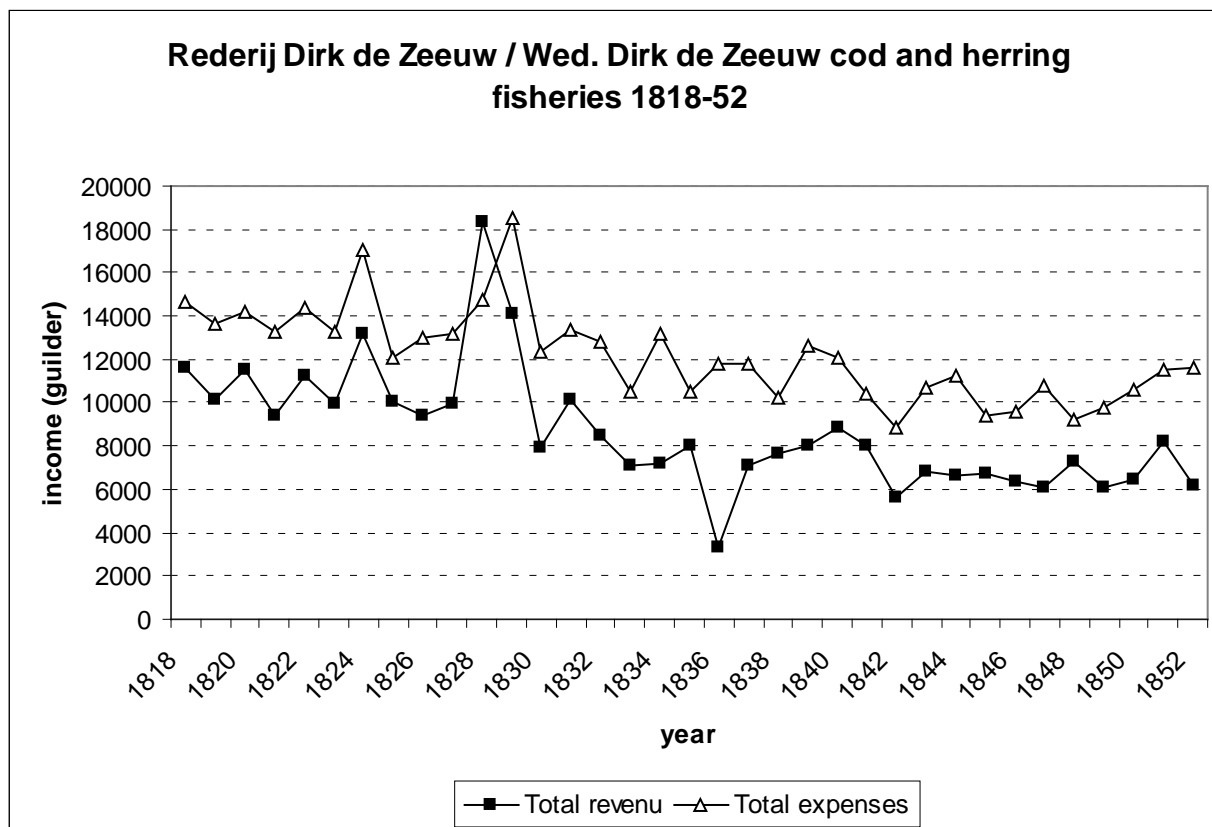
Unlike her colleague Hendrik Kikkert, Neeltje Drop reported no catch of cod in 1836 when one of her vessels *Gelukkige Verandering* wrecked. In reality, the second vessel that was

³⁹⁴ Nationaal Archief de Haag toegnag no.3.11.05 inv.1-2 and Stadsarchief Vlaardingen ISIS and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the names of Rederij de Zeeuw's vessels fishing for cod, the names of the seamen, mates or skippers fishing and the amount of cod caught per year from 1818-1852, The fishers measured their salted cod in barrels equivalent to 32 cod per barrel

fishing for cod: *Vrouw Neeltje* had an annual catch, and additionally she borrowed a vessel: *Zelden Rust* from a relative for the rest of the year to resume cod fishing after the wreck of *Gelukkige Verandering*. All three vessels went for herring as well.³⁹⁵

The business

Looking at the accounts of *Rederij de Zeeuw* there is a decline, but no total loss, in 1836.

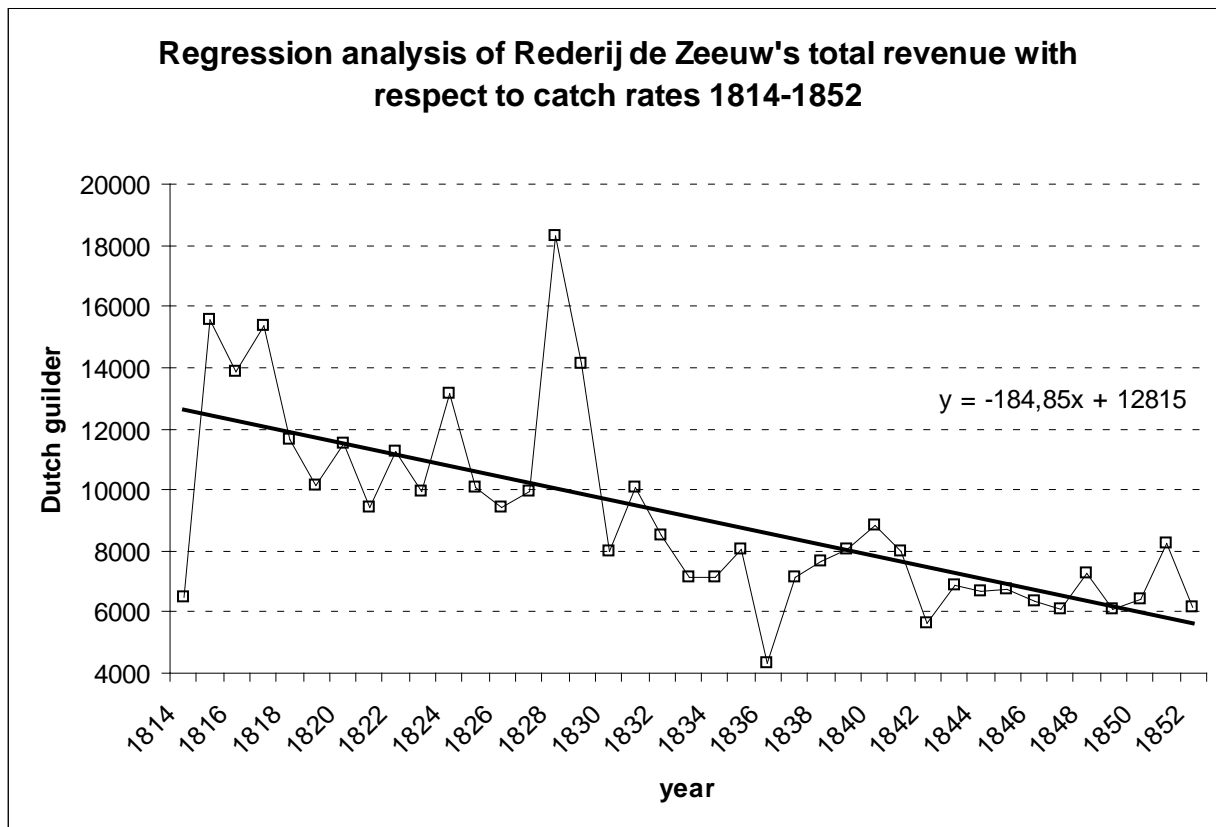


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De Zeeuw's accounts included cod as well as herring fishery and the financial support of approximately 500 *guilder* per season per specie, showing an average, but declining business from 1818-1852. If the ship owners left their business for their wives, they must have had confidence they would run it well.

³⁹⁵ Stadsarchief Vlaardingen, no.0017, inv.1-6 and Naamlijste der Haringschepen in Zuid- en Noordholland 1836

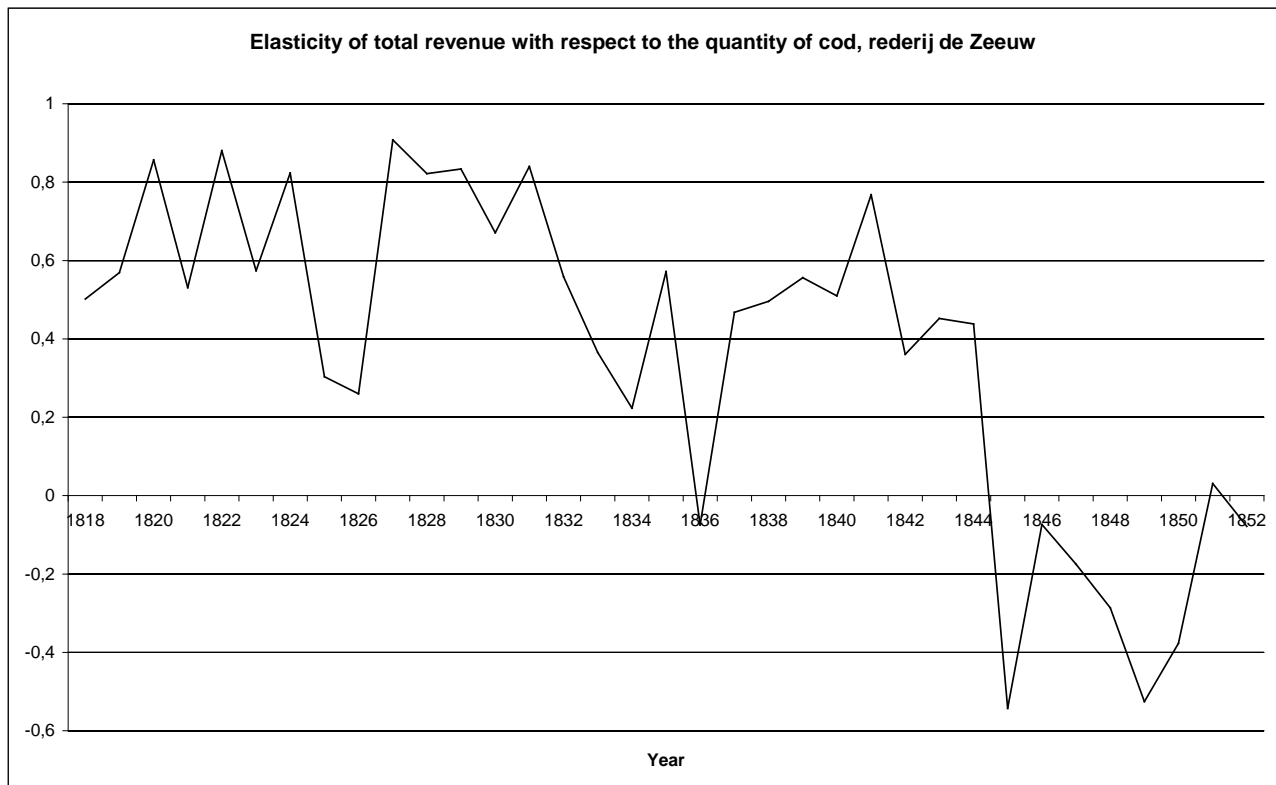
³⁹⁶ Stadsarchief Vlaardingen no.0017 inv.1-6 on Rederij de Zeeuw's account 1818-1852 – the qualitative records hold information lacking in the quantitative records



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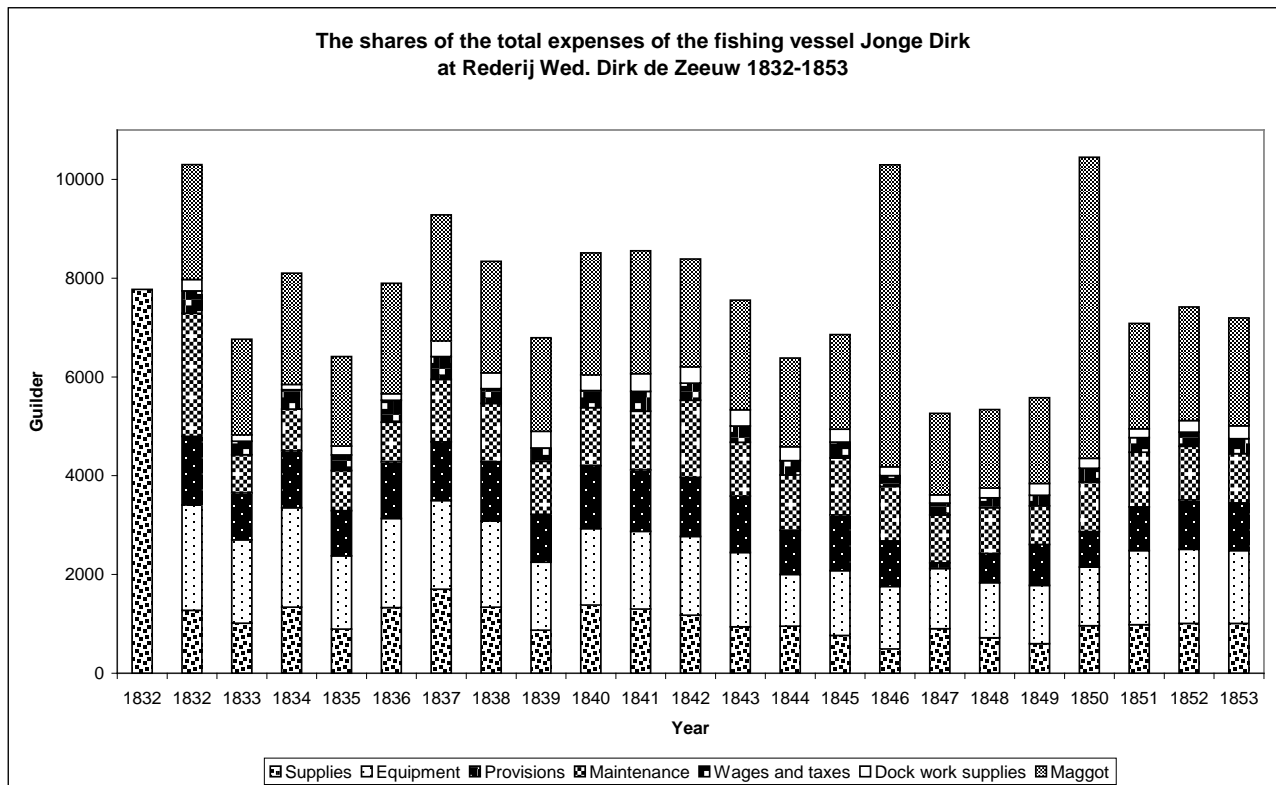
Testing the data from respectively Dirk de Zeeuw / Neeltje Drop shows little influence from changing factors, but an amazing inelasticity of the total revenue with respect to the quantity of cod landed.

³⁹⁷ Stadsarchief Vlaardingen no.0017 inv.1-6 and Nationaal Archief toegang no.3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the graph on the Chow regression model on different factors of production of rederij de Zeeuw and on the graph on the business' sensitivity of income to the amount of cod caught; both made in assistance with Montacer Ben Cheikh, with reservations to the quality of the historical data



This is a comparison between the relative change in the total revenue from fishing and the relative change in the amount of cod caught in the North Sea by the fishers on the two vessel *Gelukkige Verandering* from 1818-1836 and *Jonge Aletta* from 1837-1852. From 1818-1844 the revenue was elastic as to how much cod was caught, but the elasticity was fluctuating, suddenly becoming inelastic from 1845-1852. It is hard to tell exactly why. In 1825, the Netherlands had a big flood, which might have affected the fishing and the demand for fish. In 1830-32, the Netherlands had cholera epidemics, which might also have affected the demand for fish. It was also the time, when the southern provinces seceded to form Belgium. In 1836, one of the vessels wrecked, affecting business, and in the mid-1840s Belgium manifested their ban on imports of Dutch fish. There was also a second cholera epidemic. The financial support was an option not all ship owners took advantage of. The widowed Neeltje Drop had unlike her husband Dirk de Zeeuw one vessel fishing for cod without applying for or receiving any support.³⁹⁸ She bought the vessel *Jonge Dirk* in 1832 and sent it off for cod for twenty years. The accounts show how Neeltje Drop paid for the vessel and the rigging in 1832, while over the years maggots was a bigger item on the accounts than for example equipment or maintenance.

³⁹⁸ The records of *Jonge Dirk* are held by the Stadsarchief Vlaardingen no.0017 inv.1-6 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* see Appendix 4 note 44 and 388 and 398 and 402

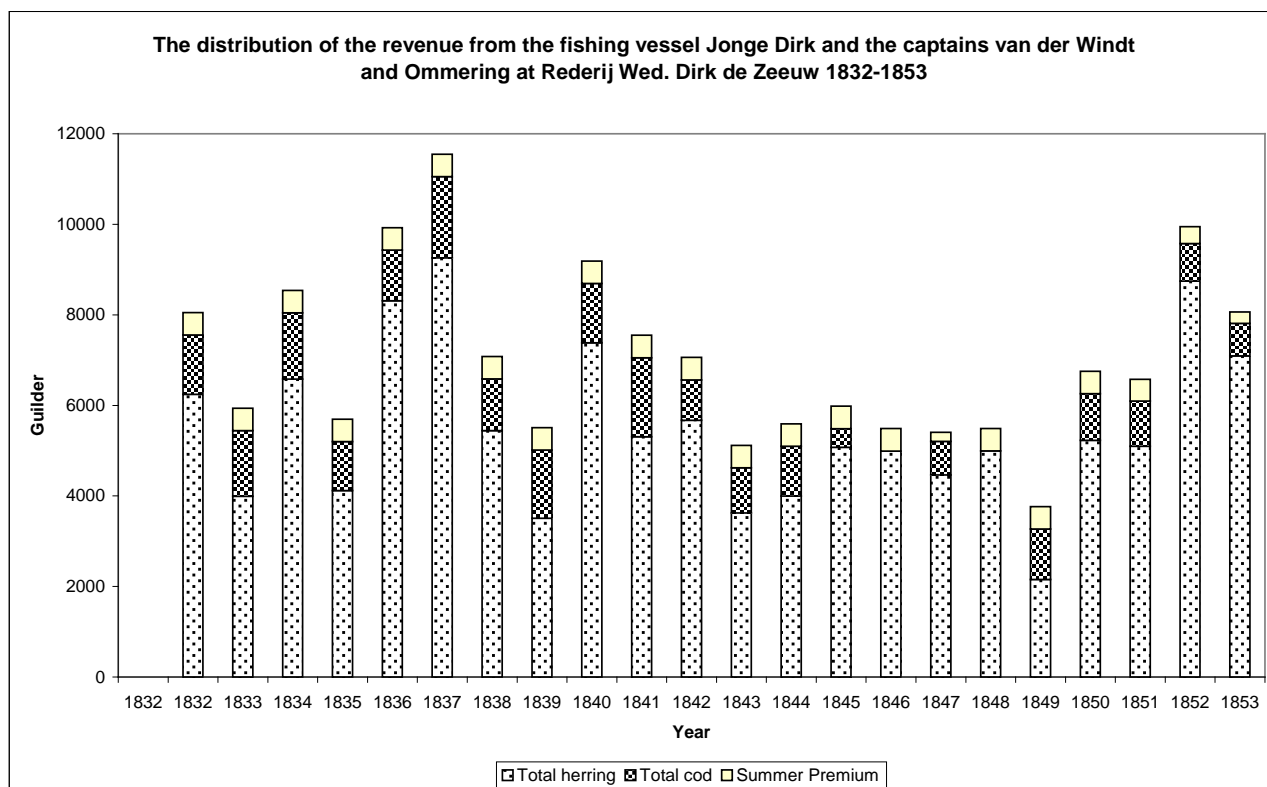


³⁹⁹ The widow of Dirk de Zeeuw, Neeltje Drop bought a vessel in 1832 and sent it off for herring as well as for cod. This graph shows how Neeltje Drop paid the vessel at once in 1832, which was not unusual. The vessel *Jonge Dirk* was primarily fishing for herring. Nevertheless, its major share of total expenses originated from its few annual trips fishing for cod in the early Spring: *kolreis*. The maggot for the long line was expensive even when the ship owners organized to minimize costs. Organization could not overcome the vagaries of the weather affecting the amount of maggot available and the consequential rise in price. The discrepancy between the items was not new to the ship owners in Vlaardingen. They had long set up an organization managing the supply of maggot, charging everybody buying maggot an annual *prikgeld* financing the upkeep of the sluice and the special area keeping the live maggot for selling.⁴⁰⁰ Two ship owners, Sebastiaan Schadd and Dirk Dorsman, managed the shareholders' paying of *prikgeld*. Like the organization for *jagerij*, the *prikgeld* organization superseded the reforms in 1857 and lasted for the rest of the century. The chapter **The Dutch cod fishing in the 1800s** told the general complaints about the price on maggot, making long line cod fishing an expensive concern. The distribution of de Zeeuw's accounts of *Jonge Dirk's* long line cod

³⁹⁹ Stadsarchief Vlaardingen no.0017 inv.1-6 and *Namlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the accounts of Rederij Wed. de Zeeuw concerning the vessel *Jonge Dirk*

⁴⁰⁰ Struijs Matthijs A.; *Prik en water. Over de Prik en het Prikkenwater te Vlaardingen*; Netwerk, Jaarboek Visserijmuseum Vlaardingen, 1993, vol.4, nr.1-2, p.7-34,42 and Vries Nico de; *Prikken, zeepsop en tinnen haringen: het gebruik van aas in de beugvisserij (1600-1900)*; Netwerk, Visserijmuseum Vlaardingen, 2006, vol.17, p.7-19

fishing versus drift net herring fishing indicates that different factors to earnings had an impact on the upkeep of cod fishing.



⁴⁰¹ The vessel *Jonge Dirk* was primarily fishing for herring. It did though fish for cod in the very early Spring, joining the last trip to sea during the Winter *beugvisserij* called *kolreis*. Some years it made two *kolreisen*; in 1841 and 1844, there was an income from such trips. In 1846 and 1848, *Jonge Dirk* did not report any income, but it seems to have gone fishing for cod according to the expenses on maggots. The few trips were the reason; *Jonge Dirk* did not apply for or receive *premie* for practising *beugvisserij* during Winter. The Summer Premium was granted for the herring fishery. The ship owners' embedded ties from multiple occupations and family relations secured profitability and sustained cod fishing as a business.

The sidelines

Hendrik Drop de Zeeuw became a ship owner like his father, Dirk de Zeeuw. He also became a ship builder, the boss of a shipyard and a rentier.⁴⁰² He married Johanna Bubbezon, a daughter of a ship owner's family in Vlaardingen.

⁴⁰¹ Stadsarchief Vlaardingen no.0017 inv.1-6 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringshepen in 't Jaar...* on the accounts of Rederij Wed. de Zeeuw concerning the vessel *Jonge Dirk*

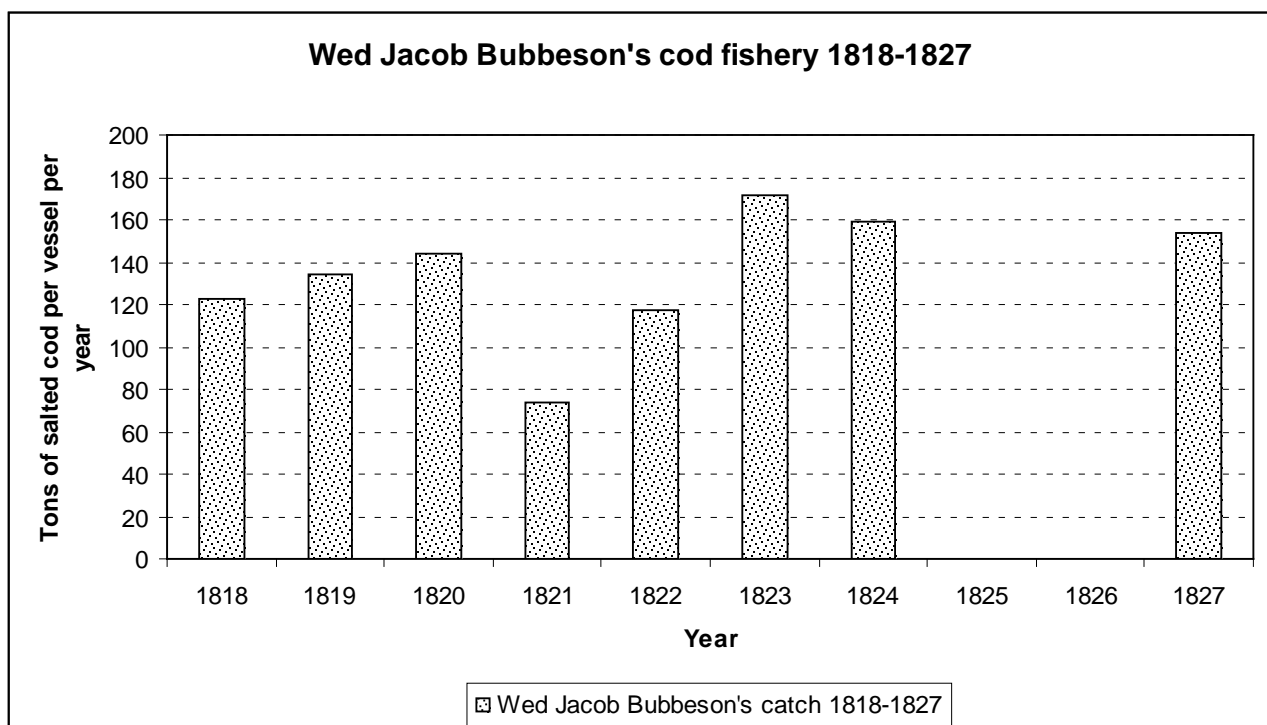
⁴⁰² Hendrik Drop de Zeeuw 08.08.1802-15.09.1885 ~ Johanna Bubbeson 29.04.1803-14.03.1870, Stadsarchief Vlaardingen, ISIS and Struijs; *Om een bevaeren schip te maecken*; 1997 chap.4 (the vessels mentioned here as de Zeeuw's belonged correctly to rederij de Hoop) – see Appendix 4 note 44 and 388 and 398 and 402



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⁴⁰³ P0704 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Hendrik Drop de Zeeuw (Vlaardingen 8-8-1802 – Vlaardingen 6-4-1895) Scheepsbouwmeester, Gehuwd met Johanna Bubbleson

The ship owners being ship builders or ship architects supplying their own fishing vessels complied with king Willem I's decision on nationally built vessels. Some thought the shipyard a proper place for all year occupation of the herring fishers not fishing for cod during winter.⁴⁰⁴ By tradition, ship owners paid dividend to the shareholders each year by the end of fishing season. From his own dividend, the ship owner paid for the rigging for the coming season, and he paid off any debt when buying the vessel. Had the ship owner paid the full price when buying the vessel, any extra dividend was his, but when the ship owner owned the shipyard, paying dividend was managing investment and maintenance on his own accounts. Hendrik Drop de Zeeuw's father in law, Jacob Bubbezon was a ship owner, and when he died his third wife, Neeltje Barmond continued the business.⁴⁰⁵ She had one vessel fishing for cod from 1818-1827.



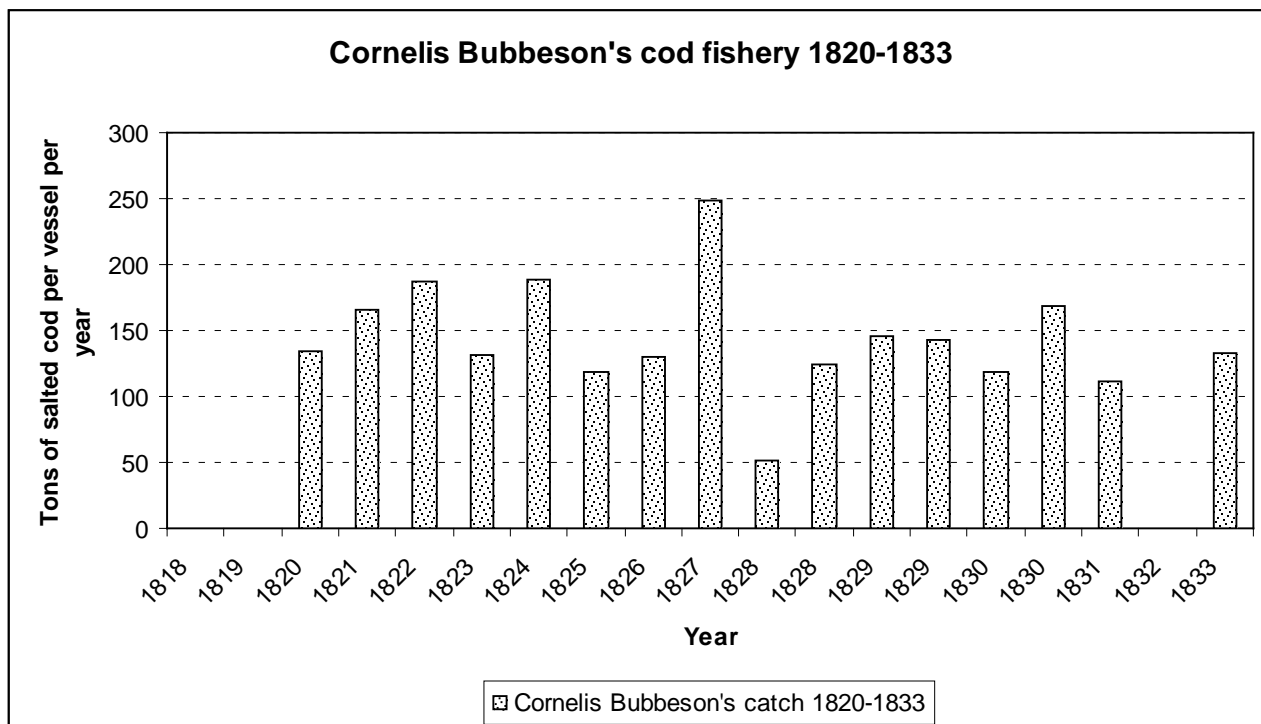
⁴⁰⁶ Hendrik Drop de Zeeuw's half-brother-in-law Cornelis Bubbezon, the son of Jacob Bubbezon's second wife became a ship owner like Jacob Bubbezon, and a block maker. From 1820 to 1833, he had one vessel fishing for cod.

(29-4-1803 – 14-3-1803)

⁴⁰⁴ Struijs; *Om een bevaeren schip te maecken*; 1997

⁴⁰⁵ Jacob Bubbezon ..-11.1817 ~ Neeltje Barmond ..-03.1826 (third wife) Jacob Bubbeson ..-11.1817 ~ Anna Wolterstorff ..-10.06.1800 (second wife) Jacob Bubbezon was engaged but not married with Meinutje Dorsman on 06.05.1785 Stadsarchief Vlaardingen, ISIS

⁴⁰⁶ Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 on Hendrik Drop de Zeeuw's mother in law's business 1818-1827



⁴⁰⁷ Cornelis sent a vessel off fishing for cod at the same time as his mother sent off her vessel. During the years 1828, 1829 and 1830, Cornelis sent off two vessels; maybe he sent off his mother's vessel for a few years along with his own before closing the business? Cornelis Bubbesson married the daughter of another ship owner's family in Vlaardingen, the Dorsman family.⁴⁰⁸ Hendrik Drop de Zeeuw's son, Pieter de Zeeuw continued the shipyard and in 1895, his widow sold the shipyard to another ship owner's family from Vlaardingen, the De Jong family, who moved the business to Scheveningen to keep track of time. The shipyard was a family business all along, developing into new areas of new technology, now exporting vessels because of the liberal abolishment of Willem I's protectionist strategy.⁴⁰⁹ There has been much criticism of the Dutch slowness to replace wooden fishing vessels with vessels of steel, but building wooden vessels was part of a whole. The oak tree for the vessels provided bark and sawdust for tarring the fishing nets. In 1858 came a new product "*cachou*" for tarring from the colonies, enabling the ship builders to choose material other than wood for the vessels without hindering parts of fishing. Such considerations show the interoperability and mutual concern of the fishing business within the community. It did not hinder productivity; it made the most of

⁴⁰⁷ Nationaal Archief den haag toegang no.3.11.05 inv.1-2 and Stadsarchief Vlaardingen ISIS on Cornelis Bubbesson's business 1820-1833, Hendrik Drop de Zeeuw's half-brother-in-law

⁴⁰⁸ Cornelis Bubbesson 05.1795-02.1832 ~ Jaapje Dorsman 06.1794-..., Stadsarchief Vlaardingen, ISIS

⁴⁰⁹ Pieter de Zeeuw 01.08.1847-... ~ Adriana Jacoba Koolhaalder 29.02.1848-17.01.1927, Stadsarchief Vlaardingen ISIS and Struijs; Om een bevaeren schip te maecken; 1997 chap.4 and p.289-345 holding a list of all vessels built in Vlaardingen

the situation, while ship owners and tarring house owners competed even so.⁴¹⁰ The idea that family business refrained from extra expenses and new technologies because of ingrained management missed contextual perspectives like this.⁴¹¹

The importance of social networking

Relatives to the De Zeeuw family

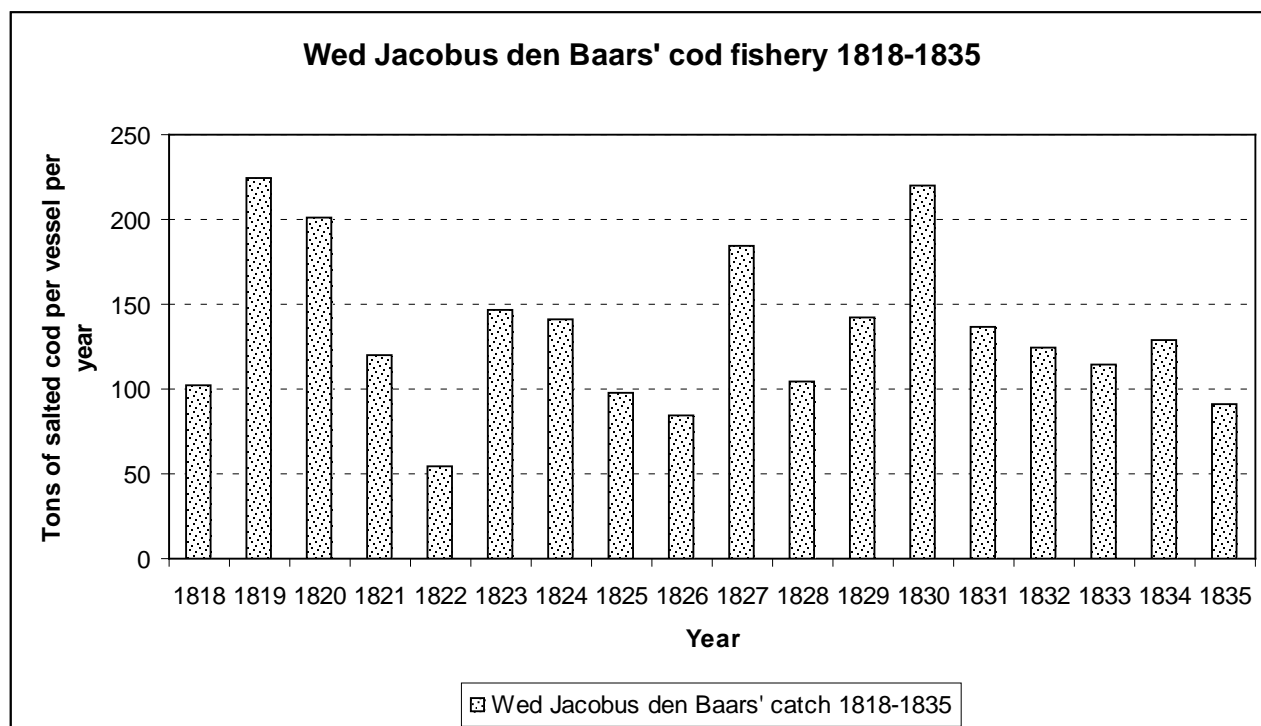
Jacobus den Baars and his second wife Magteld van Arkel were relatives to the De Zeeuw family.⁴¹² Jacobus den Baars was a ship owner, a trader and a wine buyer. Jacobus den Baars' father Pieter den Baars was a baker in the town Middelharnis. He probably supplied ship owners with biscuits when rigging. Pieter married Helena Versendaal, the older sister to Johanna Versendaal, the mother of Dirk de Zeeuw, so Jacobus and Dirk were cousins. Jacobus den Baars' father in law, Jan van Arkel was a ship owner and head of the orphanage in Maassluis, the sister town to Vlaardingen.⁴¹³ Jacobus died in 1812, when their youngest child was just two years old, yet Magteld continued the business as widow until she died in 1836. She had one vessel fishing for cod per season.

⁴¹⁰ Struijs Matthijs A.; *Taanhuizen en taanderijen in Vlaardingen 1518-1964*; NETwerk Jaarboek Visserijmuseum, nr.13, p.17-46, 2002 unfortunately, Struijs does not include the 1800s in his description

⁴¹¹ Rose Mary B. and Jones Geoffrey; *Family Capitalism*; p.1-16

⁴¹² Jacobus den Baars 11.1768-04.1812 ~ Magteld van Arkel 05.1772-11.1836, Stadsarchief Vlaardingen, ISIS

⁴¹³ Jan van Arkel 05.1745-03.1810 ~ Trintje van der Marel ..., Stadsarchief Vlaardingen, ISIS

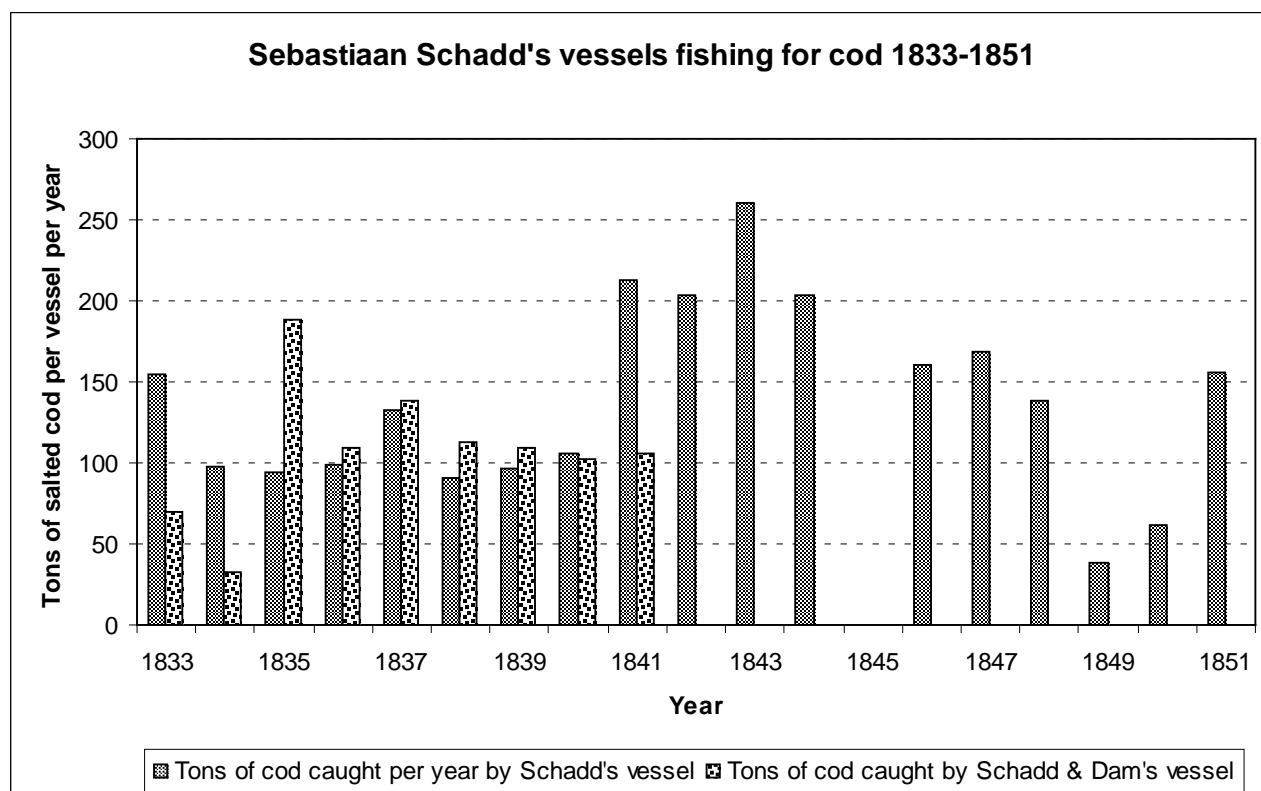


⁴¹⁴ From 1818-1824 it was *Jonge Jacob van Arkel*, and from 1825-1835 it was *Zelden Rust*. In 1836, *Zelden Rust* went fishing for Neeltje Drop, the widow of Dirk de Zeeuw. There were probably several reasons why the vessel *Zelden Rust* went fishing for the De Zeeuw. First, *rederij De Zeeuw* lost the vessel *Gelukkige Verandering* in 1836. Second, the mother in law of Neeltje Drop and the mother in law of Magteld van Arkel were sisters. Third, Magteld van Arkel died in November 1836, which may have been the reason why *Zelden Rust* never returned to her *rederij*. Maybe it continued its life as a fishing vessel owned by another ship owner, who changed its name. Magteld van Arkel and Jacobus den Baars' son Jacob van Arkel den Baars became a ship owner and a trader, and married Huibertje van Gijn, the daughter of a ship owner in Vlaardingen, Simon van Gijn.⁴¹⁵ Jacobus van Arkel den Baars' sister Helena den Baars married the ship owner Sebastiaan Schadd, who organized the *prikgeld* paying the maggot for the *beugvisserij*.⁴¹⁶ Apart from being a ship owner, Sebastiaan Schadd was a commissionair, a wine merchant, the head of an orphanage, a member of the municipal council in Vlaardingen and a member of the civic guard.

⁴¹⁴ Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 on Rederij den Baars' annual landings of cod and ling from 1818-1835, Nationaal Archief 3.11.05 inv.1-2

⁴¹⁵ Jacob van Arkel den Baars 10.05.1801-14.09.1826 ~ Huibertje van Gijn 27.10.1800-09.08.1868

⁴¹⁶ Sebastiaan Schadd 18.12.1799-31.07.1867 ~ Petronella Goudswaard 13.07.1798-08.07.1830 ~ Helena den Baars 08.06.1810-03.0.1883 Sebastiaans first wife died shortly after giving birth to their first (stillborn) child



⁴¹⁷ Sebastiaan Schadd owned one vessel fishing for cod from 1833-1844 and 1846-1851. He also had a partnership with another ship owner, Schadd & Dam, having one vessel fishing for cod from 1833-1841. Helena den Baars was the manageress of the Orphanage in Vlaardingen. The fact that most of the ship owners were interrelated, and that their business ownership was inherited emphasizes a profession of family business.⁴¹⁸ Their use of the vessel was multiple, corresponding with their multiple occupations including fishing and trading with the Southern provinces/Belgium or Portugal and Spain buying salt and cork or Norway buying tar and wax/pitch. The chance of profitability was rather constant when having shares in several vessels, while it spread the risk.⁴¹⁹ Sebastiaan Schadd went into partnership with another ship owner concerning one vessel fishing for cod from 1833-1841. So did other ship owners. The *partenrederij*, the traditional expression of shared ownership, manifested the well embedded ties of family business in Vlaardingen in the 1800s, as father and son joined forces. Five such companies fished for cod in the period 1818-1853 when support was granted. I combine the information on ship

⁴¹⁷ Nationaal Archief toegang no.3.11.05 inv.1-2 on Sebastiaan Schadd's business 1833-1851

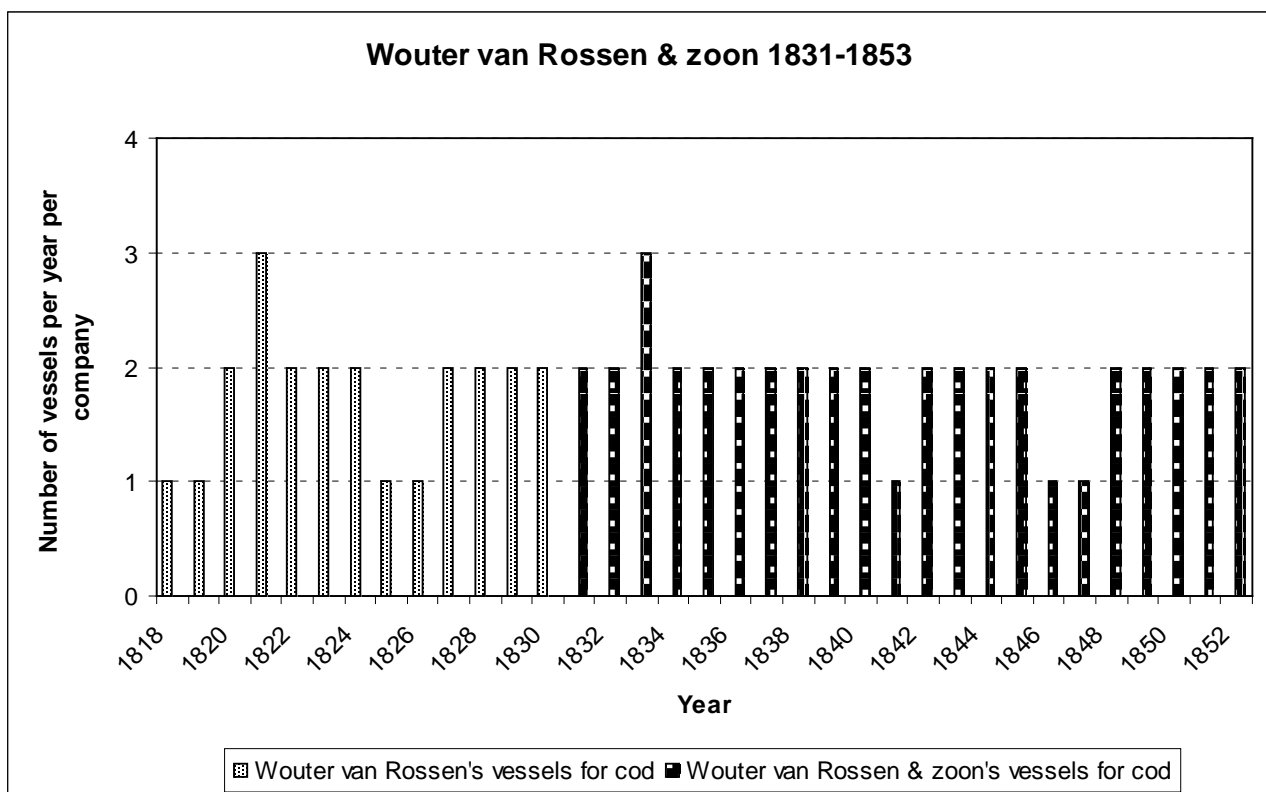
⁴¹⁸ Family business was a phenomenon dependent on economic circumstances and institutional environment. Family partnership, local engagement, and distrust of outsiders were characteristics. Rose Mary B.; *Firms, Networks and Business Values*; p.58-66

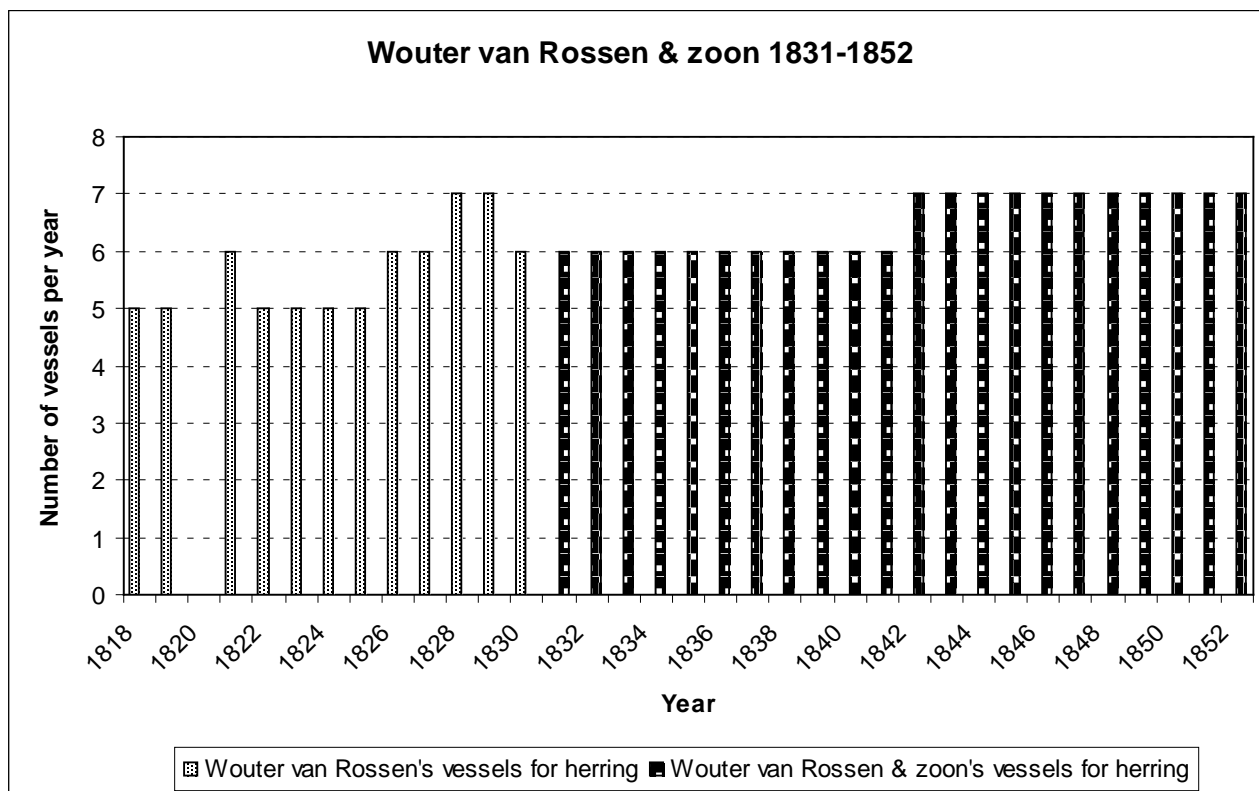
⁴¹⁹ Information may be found in Het notariaal archief Vlaardingen, but it is not accessible via the internet, see Ginkel Rob van, *Elk vist op zijn tijd, Een historisch-antropologische studie van een Zeeuwse maritieme gemeenschap, Yerseke 1870-1914*; Walburg Press 1991, p.118-121 on the need for flexibility and the benefit of family business in different maritime communities in the Netherlands and Buisman H; *De Vlaardingse Koopvaardij in de tweede helft van de negentiende eeuw*; chap.3

owners and vessels from the records on financial support from the king at the National Archive with information from the list of vessels fishing for herring kept in Vlaardingen at the time showing the activity of the companies.

Joint companies of father and son

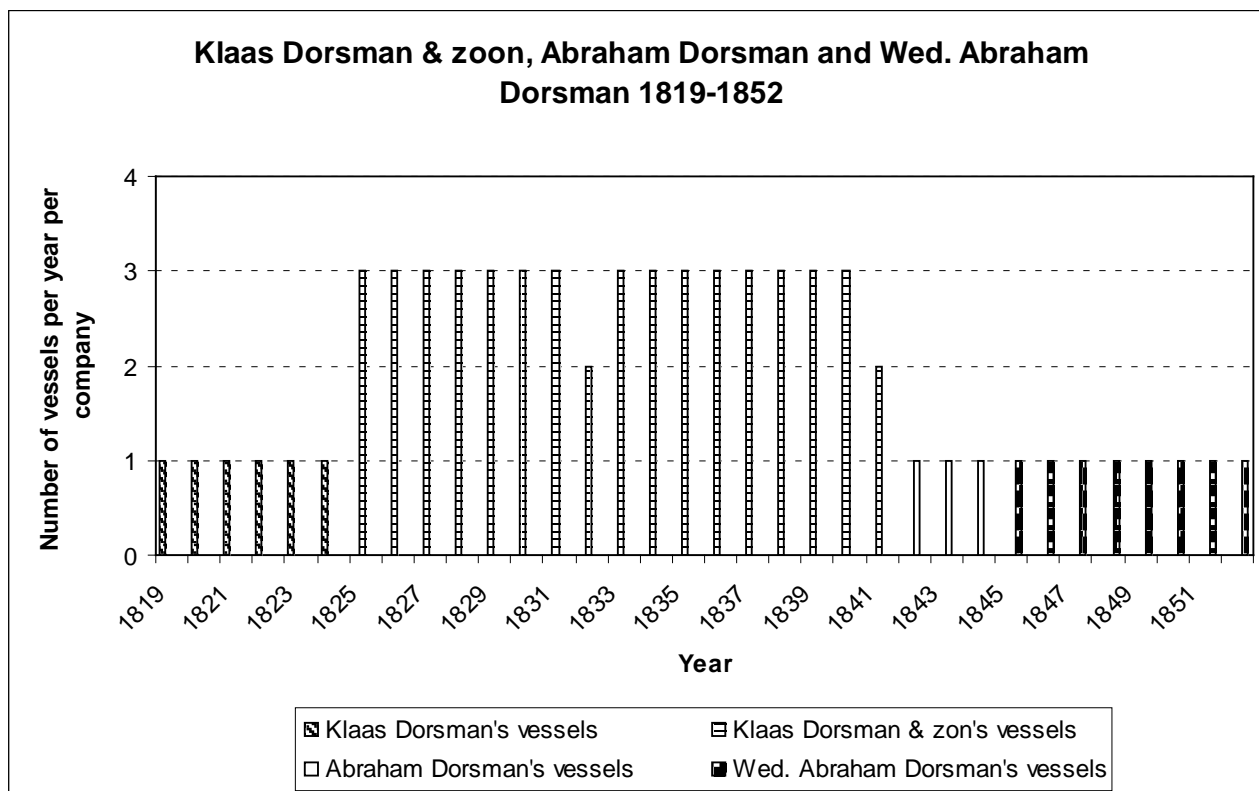
Wouter van Rossen was the father and ship owner in the first of the *partenrederijen* of father and son applying for support for his vessels fishing for cod from 1818-1830. He had a son Willem van Rossen, with whom he chose to join forces and establish *Wouter van Rossen & zoon*, sending vessels off fishing for cod and for herring. Apart from the everyday formalities, Wouter van Rossen's business seemingly had no problems.





⁴²⁰ The second *partenrederij* was Klaas Dorsmans. He managed his business in a similar way to Wouter van Rossen, as he held vessels fishing for cod for some years, then he joined forces with his son in *Klaas Dorsman & zoon*. At Klaas' death, their mutual business closed, and the son ran a business of his own until he died, and his wife continued the business for some years.

⁴²⁰ Wouter van Rossen ...-03.11.1858 ~ Neeltje van Rossen ...-02.11.1828 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.11.3.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Wouter van Rossen & zoon



⁴²¹ Seamen, mates or skippers on the vessels fishing for cod at the Dorsmans 1818-1852

1825-1827 Jan Verweij sailed *Vrouw Johanna*

1829-1836 Jan Verweij sailed *Haring & Kabeljaauwvisserij*

1838-1841 Jan Verweij sailed *Vernieuwde Hoop*

1843-1844 Jan Verweij sailed *Vernieuwde Hoop*

1845-1852 Jan Verweij sailed *Vernieuwde Hoop*

1825-1828 Maarten den Breems sailed *Haring & Kabeljaauwvisserij*

1829-1840 Maarten den Breems sailed *Stede Vlaardingen*

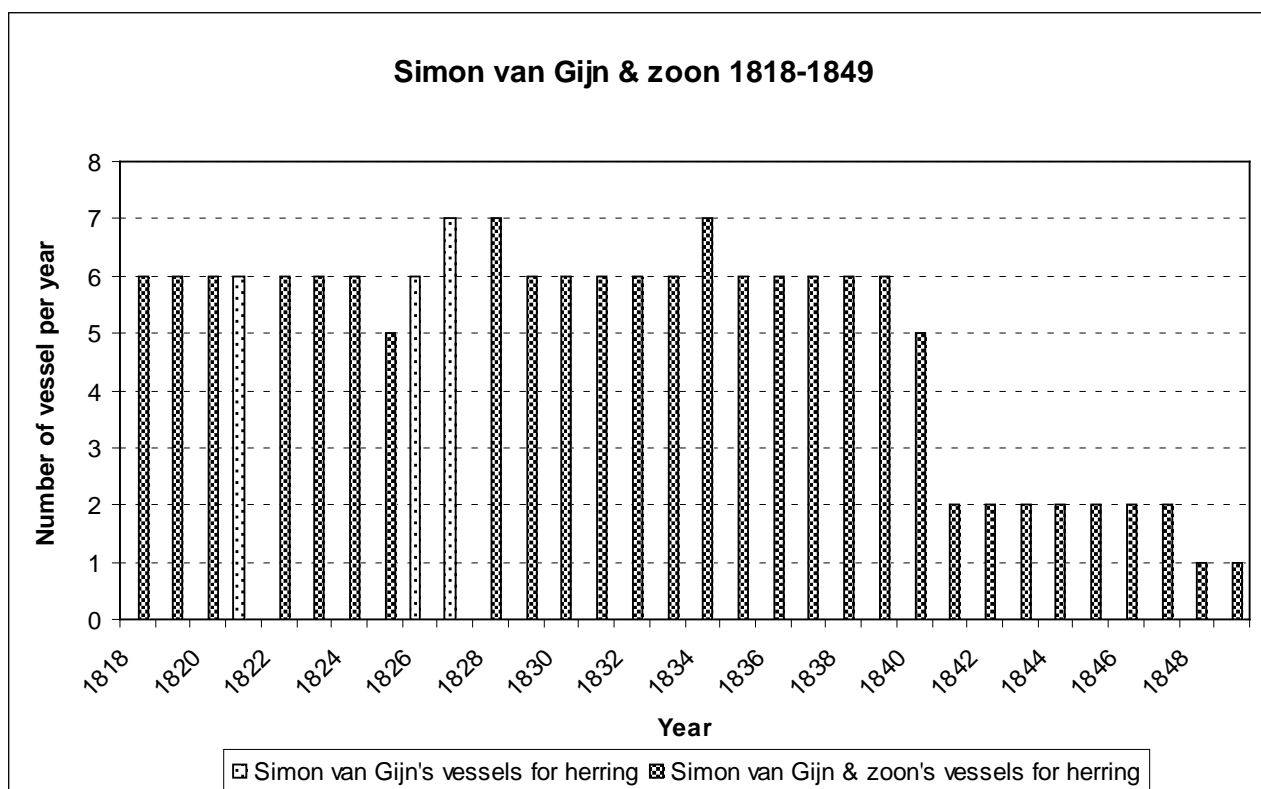
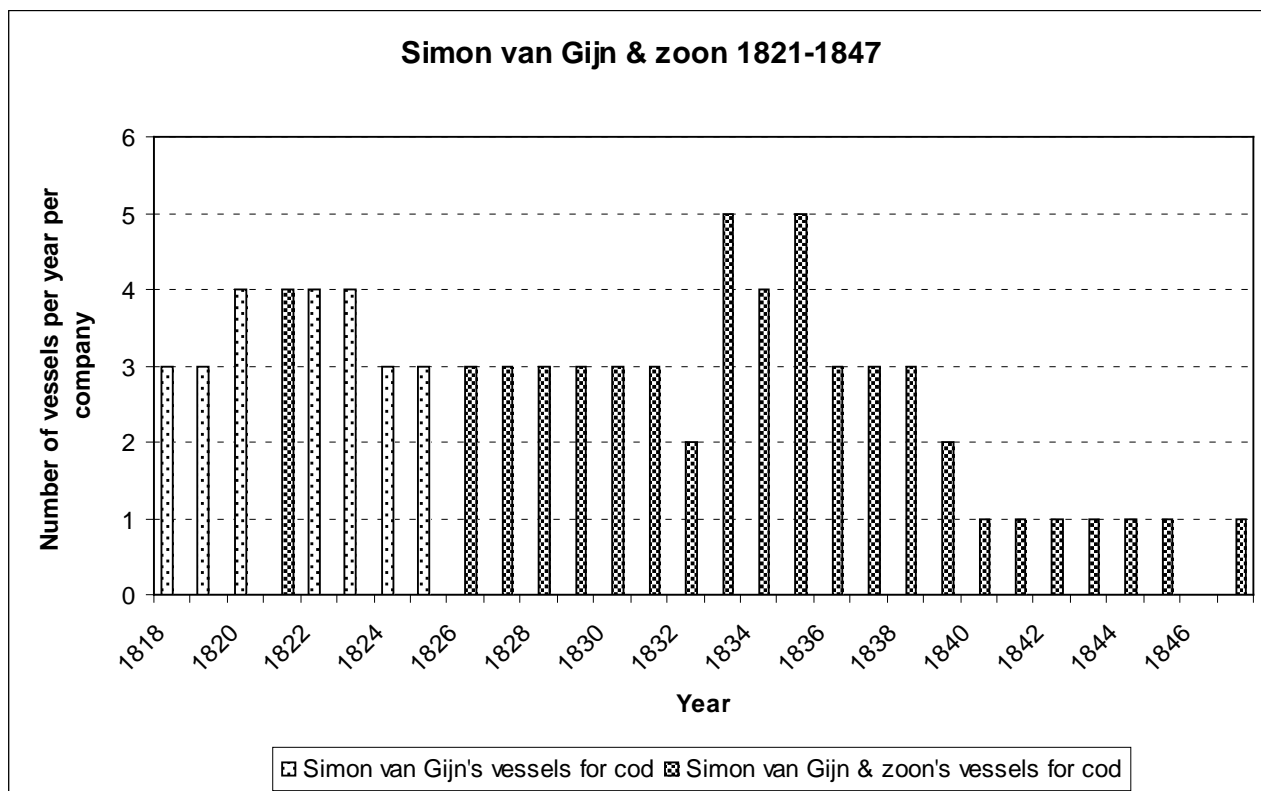
1819-1824 Abraham den Breems sailed *Vrouw Johanna*

1825-1828 Abraham den Breems sailed *Stede Vlaardingen*

1829-1841 Abraham den Breems sailed *Hopende Visser*

The third *partenrederij* between father and son was different. The ship owner, Simon van Gijn managed his own vessels along with a joint business with his son Dirk and maybe his son Pieter in *Simon van Gijn & zoon* from 1818-1849.

⁴²¹ Klaas Dorsman 06.1758-07.12.1842 ~ Johanna van der Endt 09.03.1758-11.11.1827 and Abraham Dorsman 31.8.1788-29.5.1846 ~ Johanna Hoogwinkel 18.2.1787-3.2.1868 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang 3.11.05 inv.1-2 and Stadsarchief Vlaardingen ISIS on the vessels of Klaas Dorsman & zoon, Abraham Dorsman and Wed. Abraham Dorsman 1819-1852



⁴²² Seamen, mates or skippers on the vessels fishing for cod at Simon van Gijn 1818-1847

⁴²² Simon van Gijn 06.02.1773-22.11.1833 ~ Maartje de Kater 1775-04.06.1840 and Dirk van Gijn 9.12.1804-6.12.1885 ~ Cornelia Johanna Hoogwinkel 28.6.1812-26.2.1869 and Pieter van Gijn 19.3.1812-25.11.1869 ~

1818 Huibrecht Bobbel sailed *Vrouw Maartje*
 1819-1820 Jacob Brobbel sailed *Vrouw Maartje*
 1821 Andries Hogerwerff sailed *Vrouw Maartje*
 1818-1819 Andries van Berkel sailed *Hugo en Pieter*
 1820-1831 Andries van Berkel sailed *Jonge Maartje*
 1833-1838 Maarten van der Meijden sailed *Jonge Maartje*
 1818-1827 Gerrit Verboom sailed *Hersteld Nederland*
 1820-1824 Jacob Spanjerberg sailed *Hugo en Pieter*
 1825-1828 Pieter Don sailed *Hugo en Pieter*
 1829-1833 Pieter Don sailed *Hersteld Nederland*
 1834-1847 Pieter Don sailed *Cornelia Johanna*
 1828 Teunis Boon sailed *Hersteld Nederland*
 1829-1833 Teunis Boon sailed *Hugo en Pieter*
 1834-1839 Teunis Boon sailed *Aan Ijver Vruchtbaar*
 1833 Hendrik Westerdijk sailed *Kleine Zonen*
 1834-1836 Hendrik Westerdijk sailed *Hugo en Pieter*

Simon van Gijn & zoon fished for cod and applied for support in 1821, from 1826-1845 and again in 1847; but most of the time, the vessels fished for herring. Simon van Gijn died in 1833. Maybe his wife took over the business and ran the company along with their sons, but the records should then have said *Wed. Simon van Gijn & zoon* and not just *Simon van Gijn & zoon*. There was a remarkable drop in numbers of vessels owned by the *rederij* in 1840. This may have to do with her death the same year and the winding up of her estate, enabling the sons to continue their own business, but instead they continued the company in the joint name of their father for at least another seven years. It was different to most ship owners at the time, but something ship owners began doing as a means of establishing a brand, considering their fish a commodity more so than a resource for survival.⁴²³ In 1848, the brothers divided the business among themselves. Dirk continued fishing, while Pieter continued shipbuilding.⁴²⁴

Flexibility into generations' ownership or between cod and herring fishery

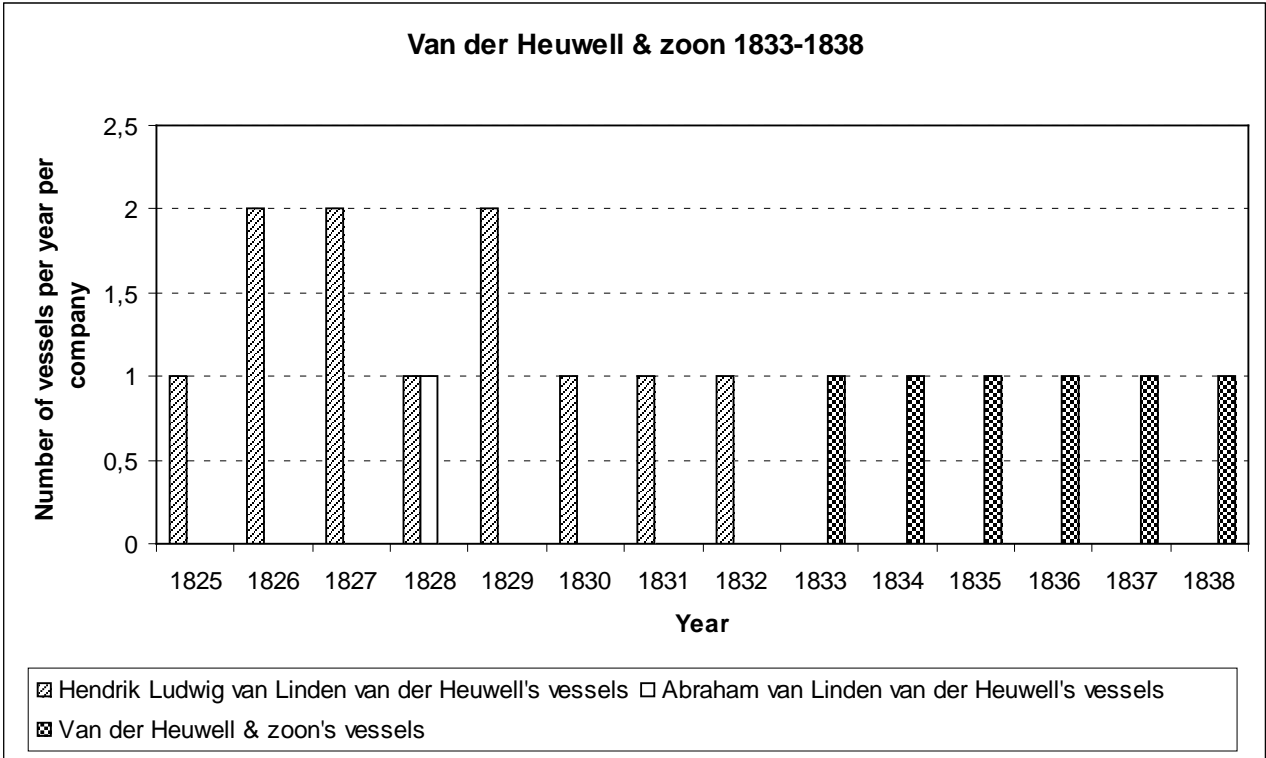
The family van Linden van der Heeeuvell is the fourth example of a *partenrederij* between father and son, as the father Abraham and the son Hendrik Ludwig joined forces concerning one vessel fishing for cod from 1833-1838, and three vessels fishing for

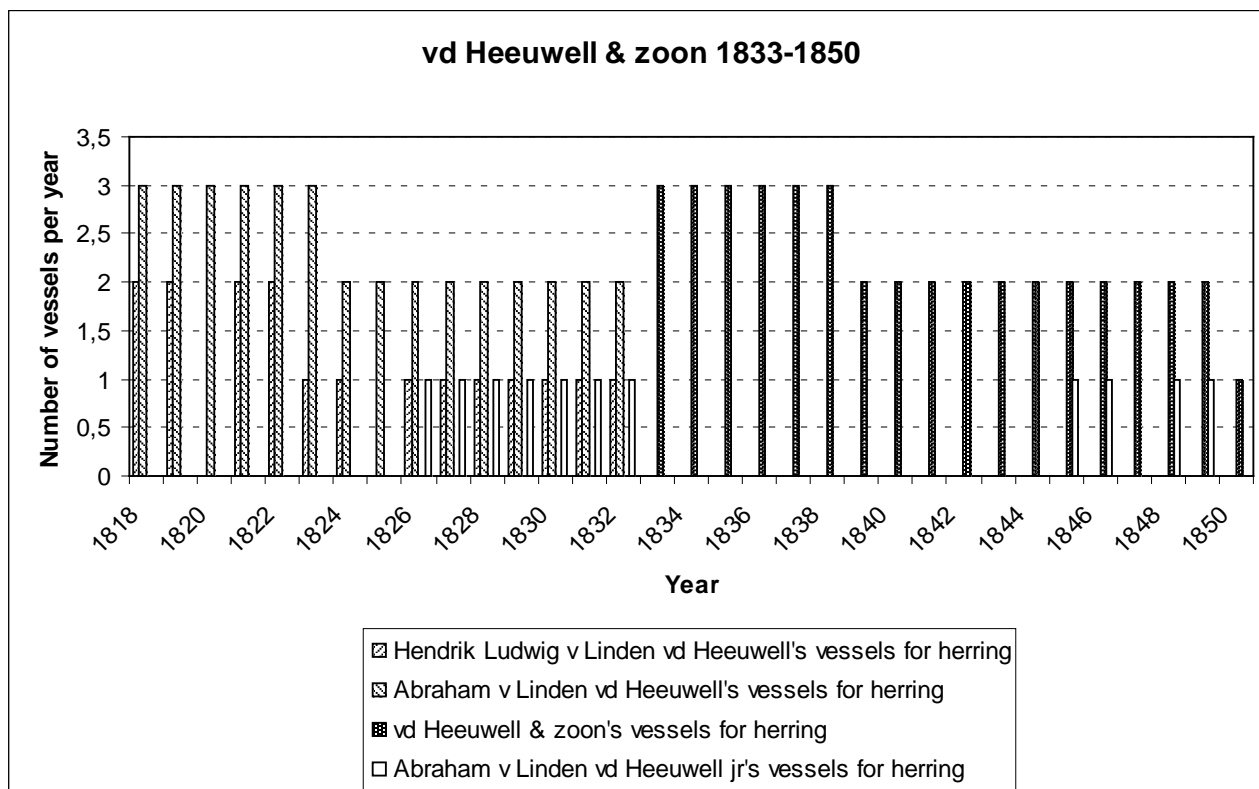
Ardina Wilhelmina Kuyl 4.1.1814-30.10.1878 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 and *Naamlijste der boekhouders, Schpen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Simon van Gijn & zoon

⁴²³ Correspondingly, Hendrik Kikkert experienced his decendants using his name as a brand for selling fish.

⁴²⁴ Struijs Matthijs A.; *Om een bevaeren schip te maecken*; chap.2

herring from 1834-38, two from 1839-49 and one in 1850. Meanwhile, each of them had their own vessels going fishing and from 1826, Hendrik Ludwig's son Abraham jr. became a ship owner himself fishing for herring like his father and grandfather.

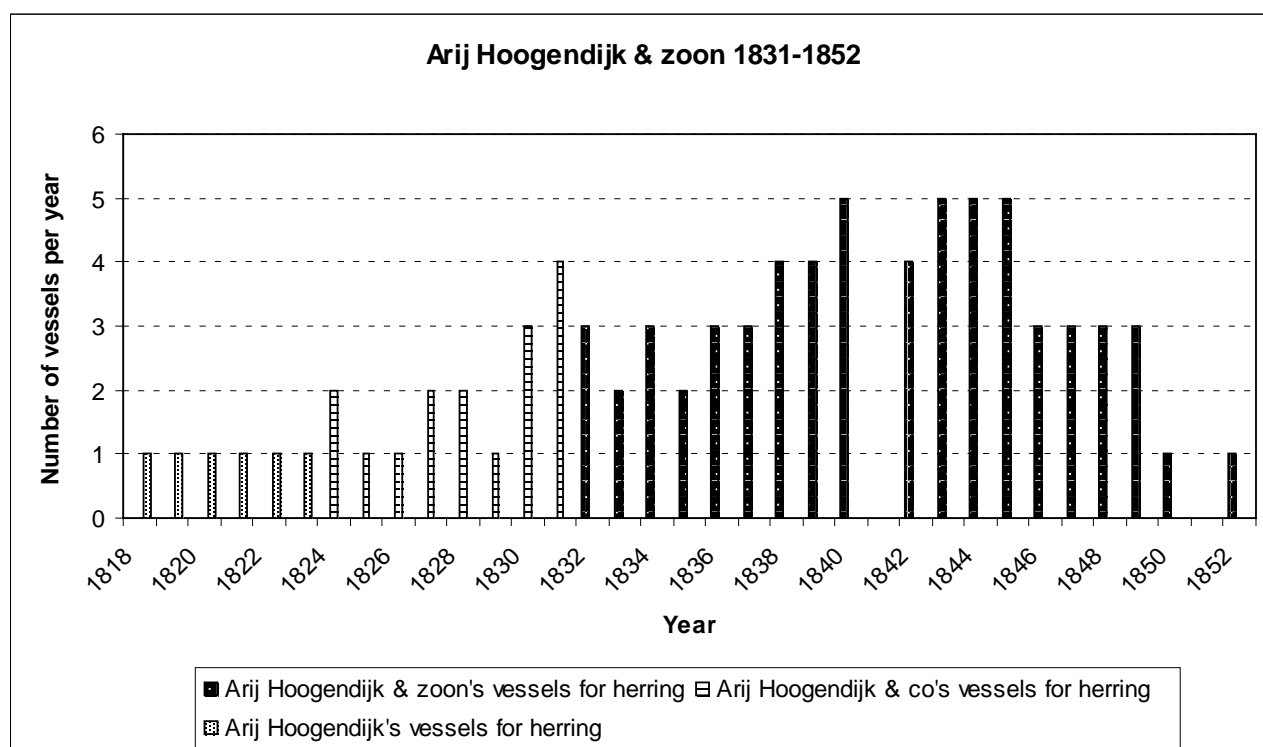
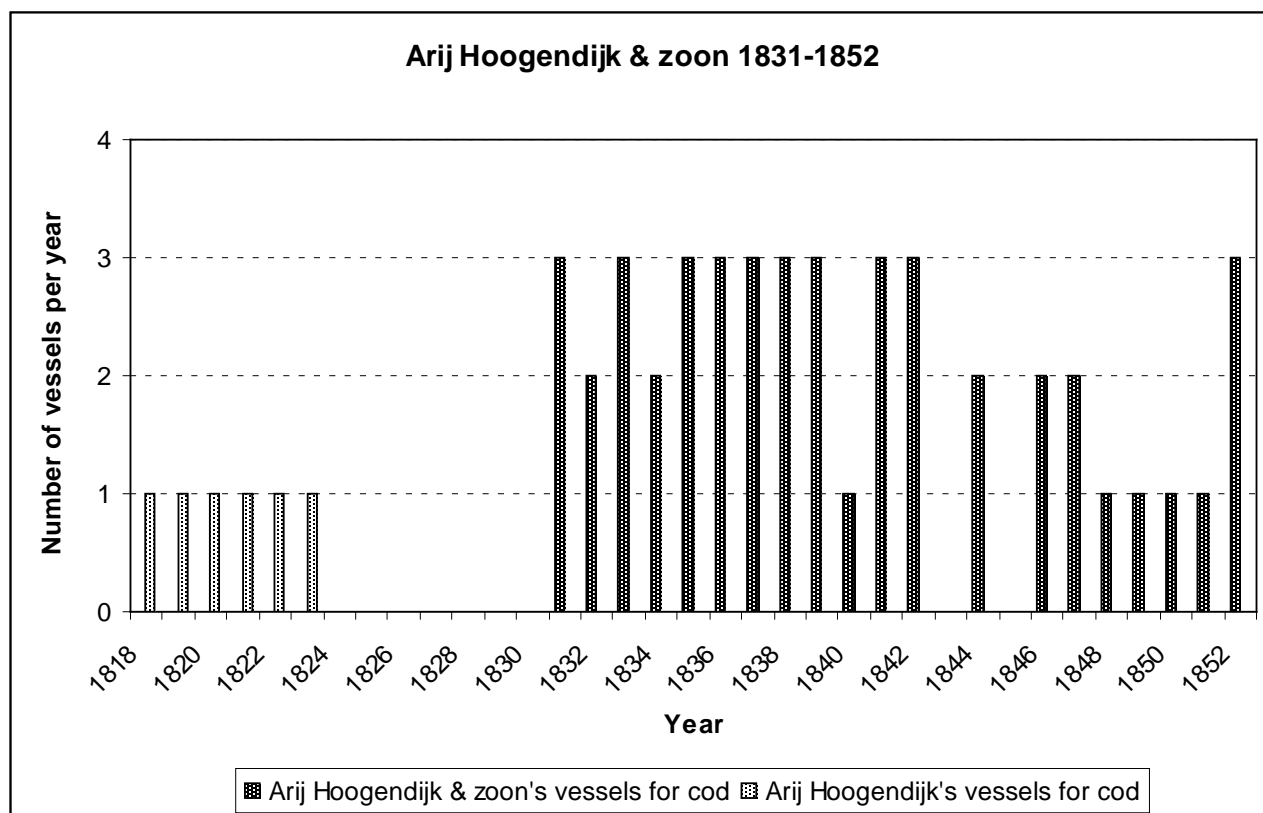




⁴²⁵ All three generations engaged in society as members of the municipal council, the provincial council, head of orphanage, or head of school commission. In 1788, the oldest Abraham van Linden van der Heeuvel had expressed his patriotic political engagement, to a degree that he must leave the province Holland and stay in Zeeland for a while.⁴²⁶ In spite of the fact that the van Linden family owned several fishing vessels, this was not the prime part of family business, rope making was. The fifth partenrederij of father and son, *Arij Hoogendijk & zoon*, started like the others, when Arij - being father - had vessels fishing for cod from 1818-1823.

⁴²⁵ Abraham van Linden van den Heuvel 24.10.1756-01.09.1832 ~ Luidwina Belia van den Heeuvel 25.01.1750-06.02.1785 and Hendrik Luidwijn van Linden van der Heeuvel 31.01.1785-06.02.1854 ~ Heilina van Heijst 15.08.1784-21.02.1850 and Abraham van Linden van der Heuvel 26.07.1806-14.10.1869 ~ Johanna Elisabeth Betz 28.02.1813-22.02.1883 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of van der Heeuvel & zoon

⁴²⁶ Struijs M. A.; Abraham van der Linden. Leven en werk van een belangrijke achttiende-eeuwse Vlaardinger; Vereniging Vrienden van het Visserijmuseum, Vlaardingen 1995



⁴²⁷ Arij did not sell his vessels in 1823, they fished for herring instead from 1824-1831 and

⁴²⁷ Arij Hoogendijk 08.1754-12.02.1841 ~ Johanna van den Brink 04.1752-13.08.1835 and Jacobus Hoogendijk 16.03.1777-1867 ~ Betje van Rossen 19.12.1773-1867 Stadsarchief Vlaardingen, ISIS and

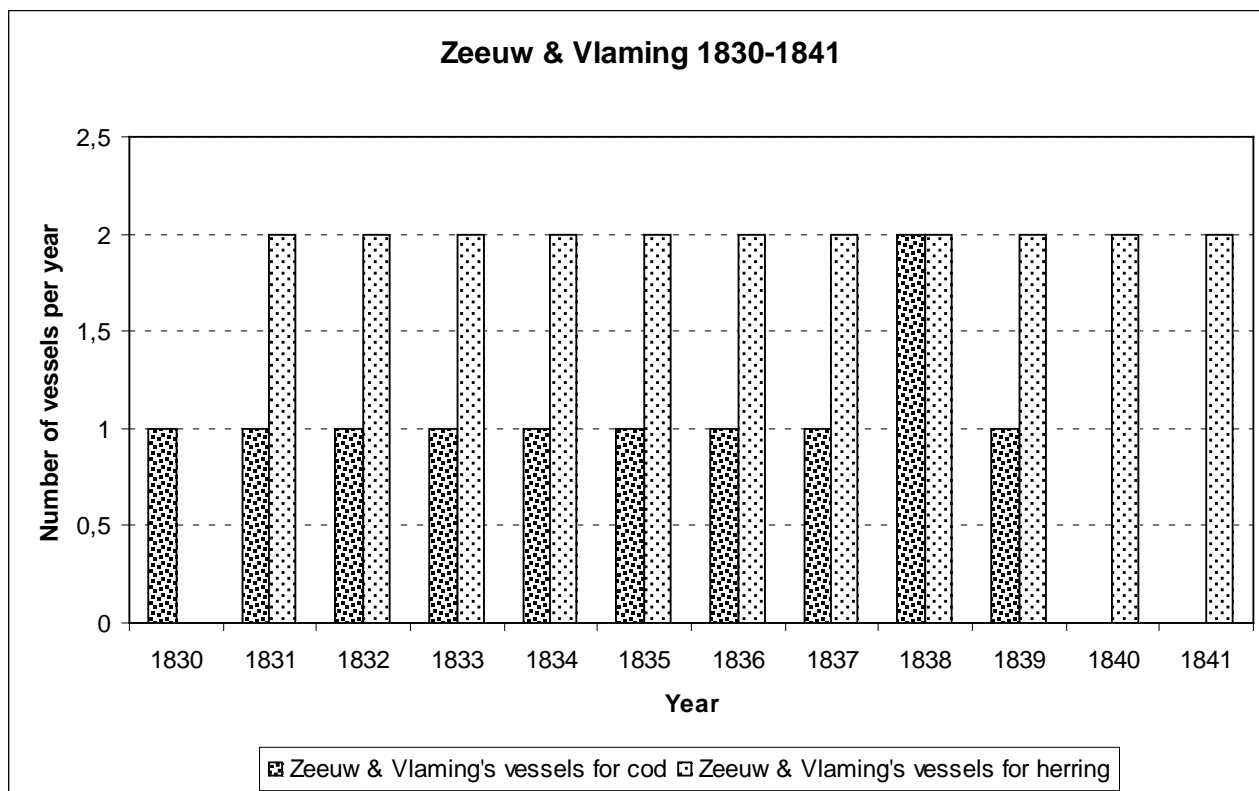
registered in another business he set up with colleagues called *Arij Hoogendijk & Co.* From 1832-1852, Arij Hoogendijk joined forces with his son Jacobus Hoogendijk and the vessels again fished for cod as well as for herring in *Arij Hoogendijk & zoon*. These cases show there was plenty of flexibility among ship owners into the structure of their business, be it between generations' ownership or between cod and herring fishing. The flexibility accommodated for the ups and downs in fishing business as well as the ups and downs in life in the fishing community during the 1800s.

Social networking and shared ownership

A common criticism of Dutch fishing business, in particular during the first half of the 1800s, is the persistence of family business and the resistance of limited companies. This is because attendance has not been paid to the criteria set by king Willem I concerning limited companies or to the importance of the immense networking among the ship owners locally.⁴²⁸ Why would you establish limited companies involving the king when the *partenrederijen* sufficed? Neeltje Drop, the widow of Dirk de Zeeuw, or more likely their son, Hendrik Drop de Zeeuw engaged in a *partenrederij* called *De Zeeuw & De Vlaming*, with another ship owner named Wouter de Vlaming.

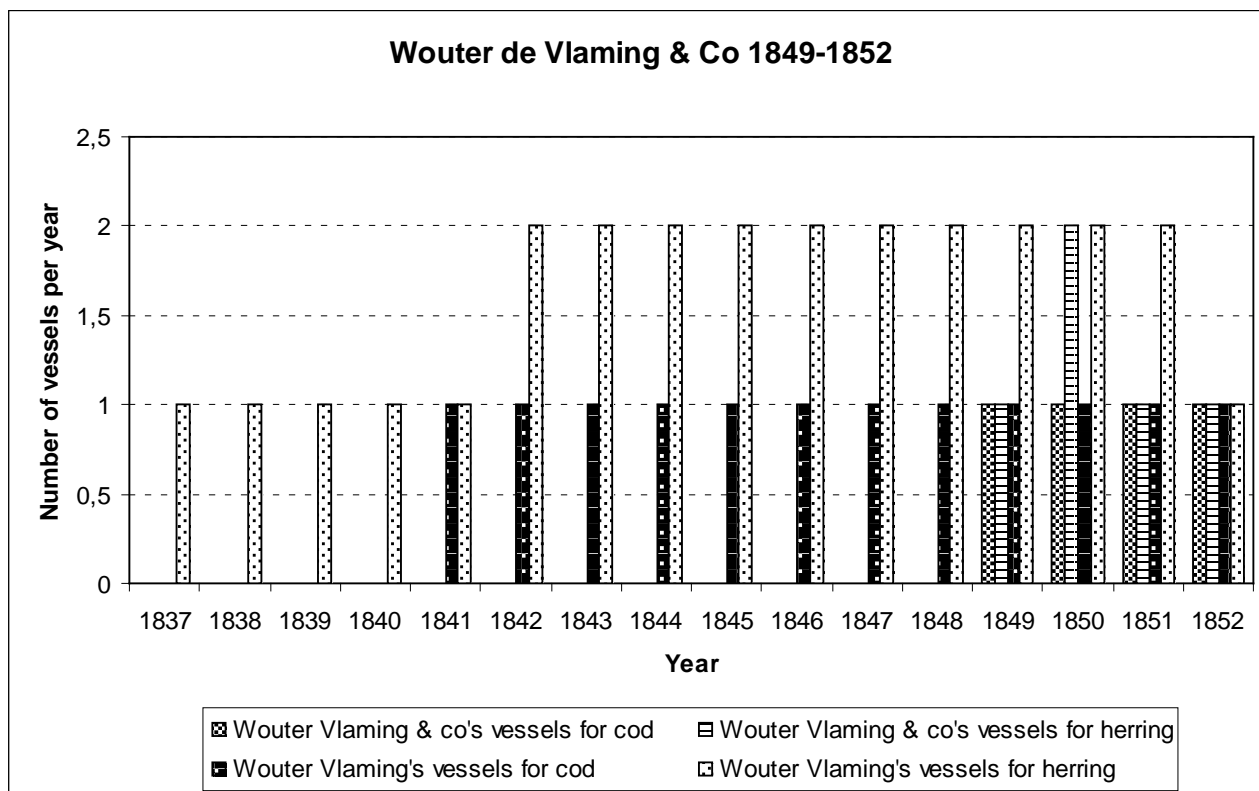
Nationaal Archief den Haag toegang no.11.3.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Arij Hoogendijk & zoon

⁴²⁸ See Hopstaken; *De Katwijkse Maatschappij*; on limited companies in Dutch fishing in the first half of the 1800s



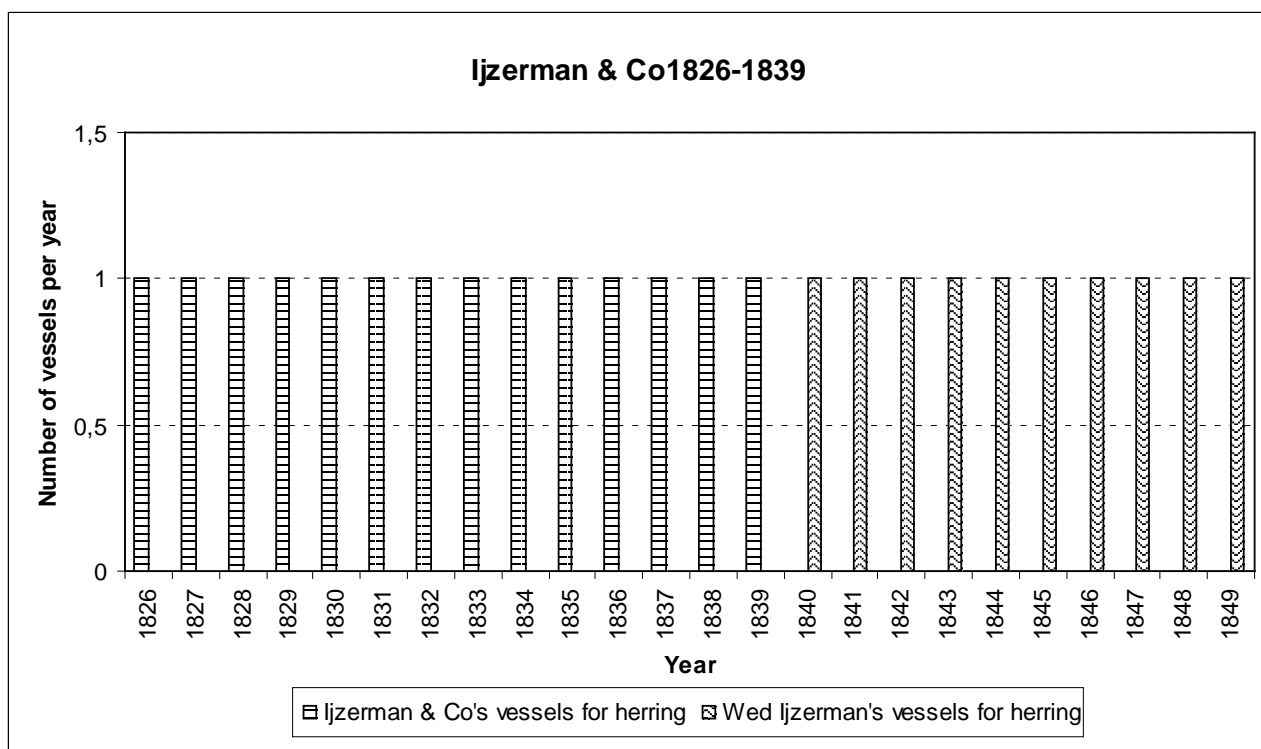
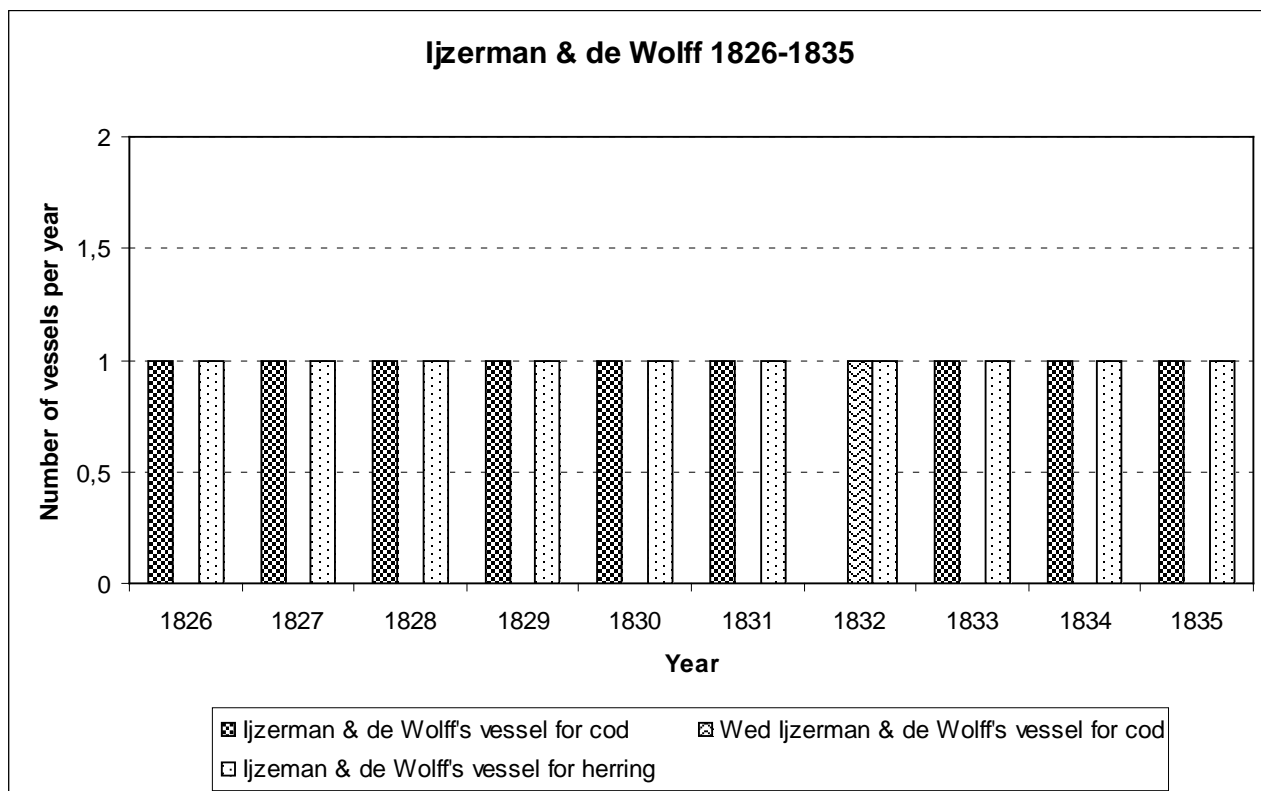
⁴²⁹ Wouter de Vlaming was married to the sister of Hendrik's half-brother-in-law Cornelis Bubbezon, and a good example of the responsibility and the importance of exchange of knowledge and experience within the family business. Wouter de Vlaming and Hendrik Drop de Zeeuw joined forces soon after the death of Dirk de Zeeuw in 1830, and the partnership lasted a decade, having one vessel fishing for cod from 1830-1839 and two fishing for herring from 1830-1841. Wouter de Vlaming had himself a vessel fishing for cod and herring along with the vessels engaged in the partnership with de Zeeuw in the 1830s. In the late 1840s, after the *De Zeeuw & De Vlaming* closed, Wouter de Vlaming set up another business in co-operation with colleagues.

⁴²⁹ Wouter de Vlaming 27.01.1794-08.10.1859 ~ Meijnotje Bubbezon 16.05.1799-04.12.1851 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of De Zeeuw & De Vlaming 1830-1841



⁴³⁰ This new business, *Wouter de Vlaming & Co* fished for cod and herring from 1849-1852. *Ijzerman & de Wolff* was a similar *partenrederij* established by two colleagues, Henricus Antonius Ijzermans and Huijbregt de Wolff. Their vessel fished for cod and herring from 1826-1835.

⁴³⁰ Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Wouter de Vlaming & Co



⁴³¹ Henricus Antonius Ijzermans also participated in a *partenrederij* with colleagues called

⁴³¹ Henricus Antonius Ijzermans 04.1786-11.08.1831 ~ Anna Catharina van der Burg 03.1795-21.07.1874 and Huijbregt de Wolff ... ~ Neeltje Boekee 11.1771-21.02.1846 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang no.11.3.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Ijzerman & de Wolff and Ijzerman & Co

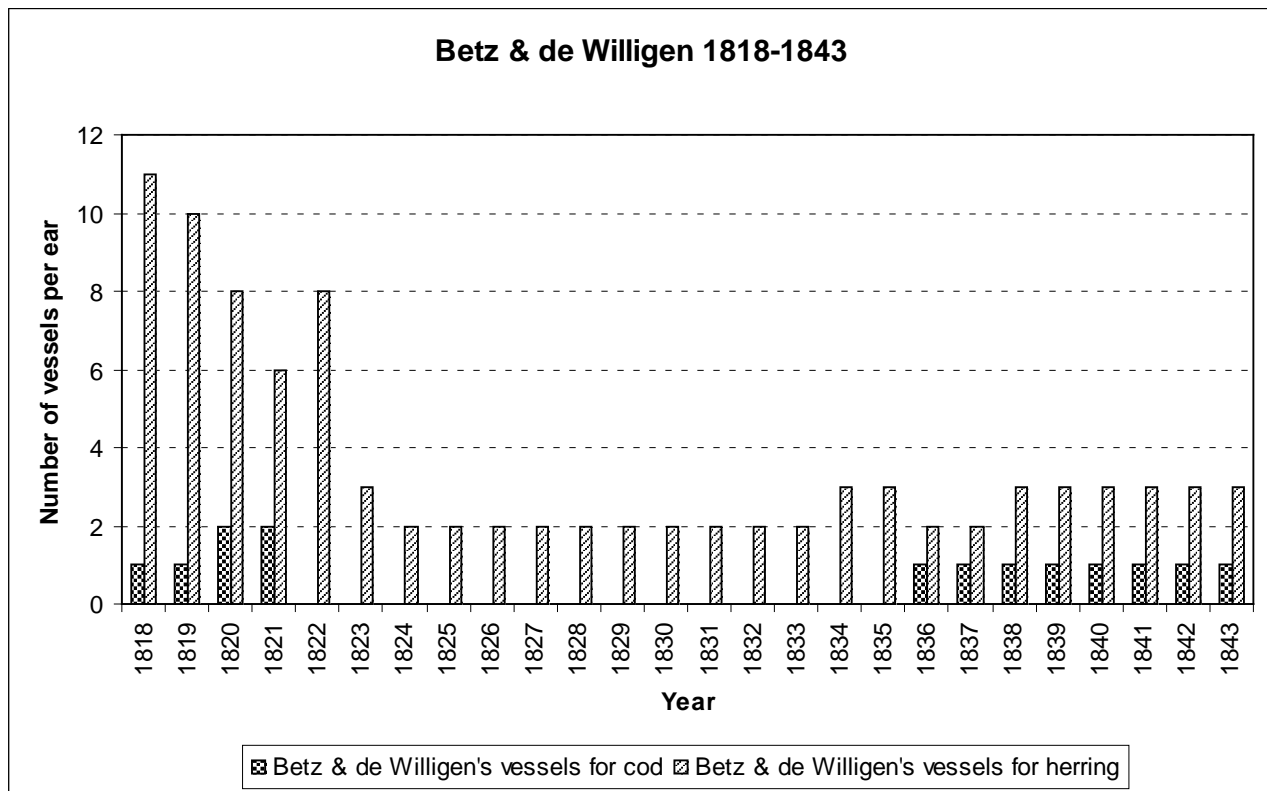
Ijzerman & Co having a vessel fishing for herring from 1826-1839, but unfortunately *Ijzerman* died in 1831. According to the records, his wife took over business partly as widow ship owner, partly registered under the original names of *Ijzerman & de Wolff* and *Ijzerman & Co*. There is no doubt that relationship among families and marriage was important in fishing business; while networking was important to business matters in all parts of maritime culture in the Netherlands in the 1800s.⁴³²

Social networking and limited companies

When Pieter Kikkert (senior) came to Vlaardingen from Leiden, it was particularly for the job as bookkeeper in the big ship owners' businesses, *Fa. Hoogendijk, Betz & De Willigen*. He worked for Jacobus Hoogendijk, Johan George Betz and Jan de Willigen who together set up various *rederijen* over the years along with other ship owners, while also rigging their own vessels for fishing or commercial shipping. Johan George Betz, Jan de Willigen and Jacobus Hoogendijk made the most of cod fishing during the French occupation. They borrowed space in colleagues' warehouses for their produce if convenient, and they established processing sites for salted and dried fish in some of the coastal towns as the French repealed the Dutch law on fishing, abolishing the monopoly on salted herring.⁴³³ They were good at making business in tough times so when looking at the records applying for support for cod fishing, it attracted attention that this *rederij* had amazingly few vessels fishing for cod during the first half of the 1800s.

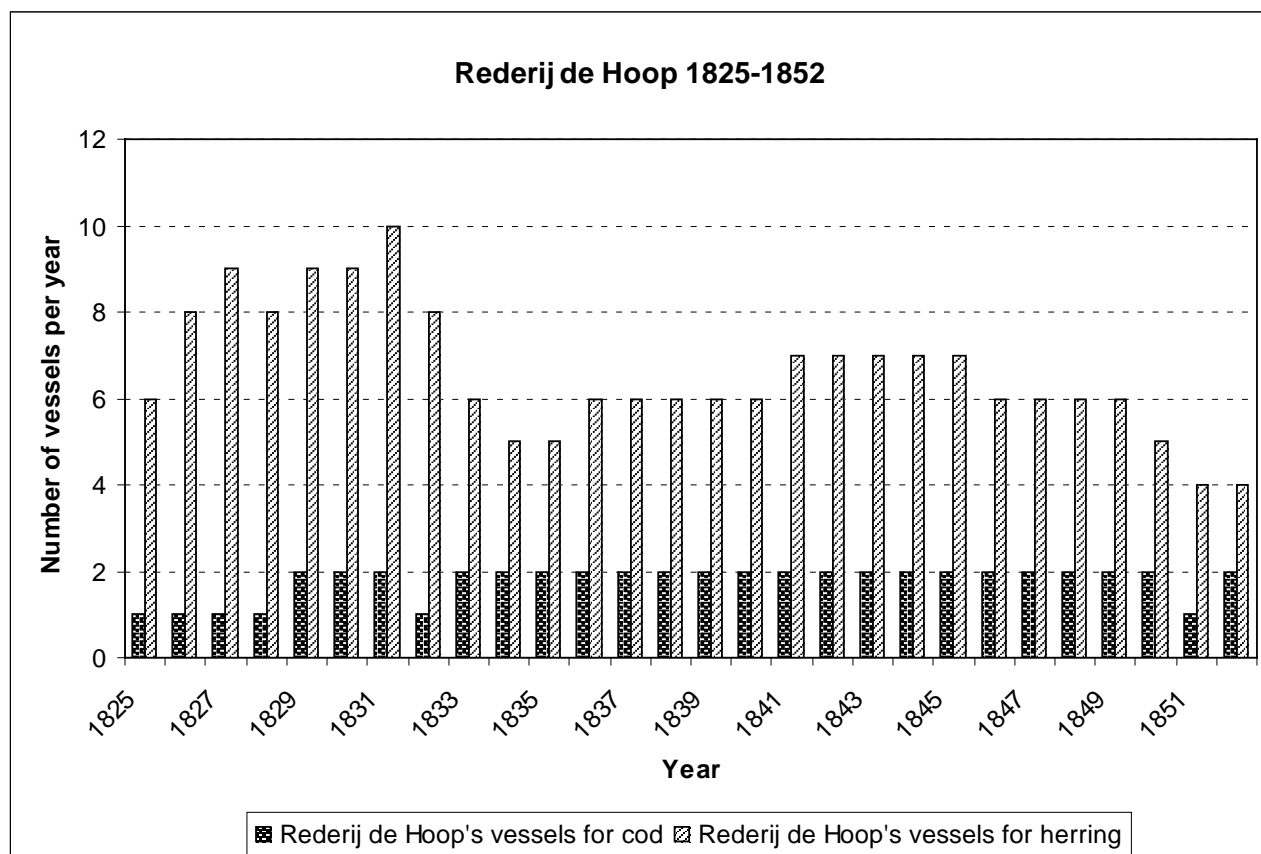
⁴³² Callahan Mauren; The harbour barons: Political and commercial elites and the development of the port of Rotterdam, 1814-1892; doctoral thesis, 1981, Princeton University

⁴³³ Plaatzer M.Y.; Firma Hoogendijk, Betz & de Willigen; chap.4-5 and Voort J.P.van de; De Rederijen en Handelsmaatschappijen Hoogendijk; chap.II.2 Hoogendijk withdrew from the partenrederij with Betz & De Willigen



⁴³⁴ It did not have many vessels fishing for herring either, which was the usual alternative to cod fishing. Neither Klaas Betz nor Jan de Willigen privately had many vessels fishing. The reason for the remarkably low number in *Betz & de Willigen* was likely the establishment of the limited company, *Rederij de Hoop*.

⁴³⁴ Klaas Betz 23.10.1800-04.10.1835 ~ Jennichjen Voomborgh 25.09.1800-04.05.1827 and Jan de Willigen 1785-28.05.1853 ~ Margeriet Maan 1772-07.12.1843 Stadsarchief Vlaardingen, ISIS and Nationaal Archief den Haag toegang 3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of Betz & de Willigen



⁴³⁵ Klaas Betz and Jan de Willigen invested in shares in the limited company supporting its investment in fishing vessels along with other ship owners and notable people including king Willem I. Klaas Betz assisted in drawing up the articles of the limited company and Jan de Willigen became one of the board members. Each share cost 500 *guilder*, and ship owners on average bought 1-2 each; among others Cornelis Bubbezon, Jan de Willigen, Klaas Betz and Hendrik Ludwig van Linden van der Heeuvel. In 1825, private people together had 40 shares, while king Willem I personally had 10 shares, the *Nederlandsche Handelsmaatschappij* (the king's business) had 40 shares, and the *Fonds ter aanmoediging der Nationale Nijverheid* (the king's organ for redirecting money from the *Nederlandsche Handelsmaatschappij* and the colonies to his own projects such as fishing) had 50 shares. The limited company had five vessels from the start, and invested in another three *hoekers* in 1828-29 at Jan de Willigen's shipyard, but somehow it did not seem to do particularly well; already from 1829, the company had deficits and in 1837, the shareholders must reinvest capital.⁴³⁶ As king Willem I resigned in 1840 and his various financial initiatives became known, conditions to the limited company in Vlaardingen changed. In 1841, the company invested in a *buis* and in 1843 in a *hoekerbuis* at Jan de

⁴³⁵ Nationaal Archief den Haag toegang 3.11.05 inv.1-2 and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the vessels of *Rederij de Hoop* and Pons; *De Bakens verzet*; chap.4,12

⁴³⁶ Pons; *De Bakens verzet*; chap.12 and Struijs Matthijs A.; *Om een bevaaren schip te maecken*; p.305-307

Willigen's shipyard, and again in 1843, the shareholders of the limited company must compensate.⁴³⁷ *Rederij de Hoop* continued its fishing business until 1878 buying only one more vessel at Jan de Willigen's in 1858. Part of the reason originated in arguments behind the limited company itself. First, an augmentation of the national financial support to herring fishing at the time, a rise in the price on herring, a cheap rigging of the vessels and a good deal in paying the fishers encouraged the ship owners to invest in fishing. Second, the ship owners' experience told them that despite misfortunes, fishing always re-established, urging them to securing the many jobs in the local community when investing in *Rederij de Hoop*. These arguments did not differ much from those applied when investing in family business *partenrederijen*. The ship owners must earn money whichever business they made, and they engaged along with colleagues or relatives, considering the societal consequences of their doings. In fishing, the difference between the *partenrederij* and the limited company was that the shareholders did not own vessels; they owned shares in a limited company. While the family *partenrederij* was flexible to sudden incidents because of the social network, the limited company must consider its many separate shareholders. It provided a possibility of collecting more money for investments, while running the risk of engaging people in dubious investments because of lacking inside knowledge common within the family business network.⁴³⁸ Interestingly, the ship owners in Vlaardingen maintained some of the benefits of *partenrederij* while profiting from the limited company by utilizing king Willem I's law on limited companies. They must use vessels built in the Netherlands, and so they did. The trick was that - in spite of several external investors – the limited company *Rederij de Hoop* used the local ship owners' vessels as a start and throughout its existence, it bought new vessels from the local initiators. Therefore, Betz & de Willigen and others had a decline in number of vessels on their own accounts during the period when engaging in *Rederij de Hoop*.⁴³⁹

Limited companies missing social networking

In 1826, the ship owners in Maassluis and Rotterdam set up a limited company in Maassluis for their fishing, and in 1838, three men occupied in fishery related business initiated a limited company for fishing in the coastal town Katwijk.⁴⁴⁰ Both companies involved the king and the *Fonds ter aanmoediging der Nationale Nijverheid*, and both companies considered the national support for herring fishing, the benefits of employment to the community and a fishing fleet of locally built vessels when writing the articles. The

⁴³⁷ *buis* is a type of vessel suited for hering fishery as well as merchant shipping and used already from the 1400s see Haalmeijer Hans, Vuik Dik; *Buizen, Bommen, Bonzen en Botters*; p.44-50

⁴³⁸ Pons; *De Bakens verzet*; chap.12

⁴³⁹ Struijs Matthijs A.; *Van der Drift in Vlaardingen, 175 jaar Warmelo & Van der Drift*; Vlaardingen 1995 p.24-26,29,75-76

⁴⁴⁰ Hopstaken; *De Katwijksche Maatschappij*; p.25-30

fishing vessels from Maassluis and Rotterdam did well in the first years, but none managed to keep up with their ideals about making a profit and paying a dividend to its shareholders in the end. They lacked the inside knowledge of the fishers and the flexibility of the small businesses. The company closed without notice in 1849. In Katwijk, the limited company had problems from the start but kept spending any revenue on building more vessels. The shareholders were not happy about the deficits appearing already in 1840 and asked for the vessels to combine *schrobnet visserij* (flatfish) and herring fishery with *beugvisserij* in order to cut the loss. This initiative helped, but not sufficiently. External circumstances during the 1840s such as the reduced financial support for fishing, restrictions in export for Belgium because of tax, low prices on fish and epidemics of cholera affected the limited company negatively. The structure of the company made it less flexible than the usual small size family businesses in Katwijk and other coastal fishing towns, and you wonder why it was established in the first place, as the director of the limited company, Dirk Taat had been director of the *Kleine Kollegie* for several years managing coastal cod fishery. In 1858, the limited company in Katwijk closed after several years' deficit, debate with shareholders and the bankruptcy of the board of directors.⁴⁴¹ The vessels then shifted owners in Katwijk keeping the fishers signed on, but many fishers from the coastal town had to quit fishing and sign on the merchant fleet instead. Then, some earned sufficient money for buying a fishing vessel, becoming ship owners themselves later in life, allowing for another type of ship owners in the coastal towns compared to the well off family network represented in Vlaardingen.⁴⁴²

Skippers' family network

Skippers, fishers and ship owners

Fishers becoming ship owners happened occasionally in Vlaardingen during the 1800s. Wouter de Vlaming who had partnership with De Zeeuw for several years was a barge skipper, a ferry skipper and a Maas skipper as well as owning vessels fishing at sea. Cornelis Bergwerf too was a ferry skipper and a merchant skipper. He married Jaapje Dorsman, the daughter of the trader and ship owner, Klaas Dorsman. Cornelis' father Jacob Bergwerf had one vessel fishing for herring from 1816-22, two vessels from 1823-26, and one from 1827-31. When Jacob Bergwerf died in 1832, Cornelis and his brother Maarten Bergwerf joined forces in *C & M Bergwerf*, keeping one vessel fishing for herring

⁴⁴¹ Hopstaken; *De Katwijksche Maatschappij*; p.42-46, 205-224

⁴⁴² Brakel J. P. van; *Vissen in Vrijheid, Katwijk van de franse tot de duitse tijd*; Uitgave Genootschap Oud Katwijk 1988 p.20-24,38-40 and Noordervliet-Jol Nel; *Mijn grootvader Willem Kuiper en zijn familie*; Mijn Leeuw, Scheveningen 1999, p.51-73

untill 1845.⁴⁴³ In 1845, Maartens wife died, leaving him with twelve children, being a ferryskipper and pramskipper. This may be why the brothers' partnership ended, and Cornelis sent off the vessel fishing for cod from 1844-1847 and for herring from 1844-50 on his own. Another ship owner, Jacob den Breems was the youngest of four sons in a family of skippers.



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His father, Martinus den Breems, had been skipper on some of the fishing vessels in Klaas Dorsman's *rederij*, but his mother Jannetje Dorsman died in 1801, when Jacob was only three. He then grew up at Cornelis Bergwerf and Jaapje Dorsman.⁴⁴⁵ Jacob chose not to become a skipper or mate like his foster father, his father and brothers. Instead, he became a cooper, a trader and a ship owner like his uncle Klaas Dorsman; he then married a skipper's daughter.

⁴⁴³ Cornelis Bergwerf 12.1786-01.05.1853 ~ Jaapje Dorsman 02.1785-19.04.1850 and Jacob Corneliszoon Bergwerf 12.09.1762-19.01.1832 ~ Maartje Maartensdochter Versteeg 12.1765-04.11.1843 and Maarten Bergwerf 21.08.1798-02.10.1881 ~ Maria Voogd 19.03.1801-18.07.1845 and ~ Krintje Bakker 30.07.1817-03.01.1870 Stadsarchief Vlaardingen, ISIS

⁴⁴⁴ P0592-1 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Jacob den Breems (Vlaardingen 27-8-1798 – Hof van Delft (Sions Lust) 20-5-1867) Gehuwd met Wilhelmina Schep (Vlaardingen 3-12-1799 – Vlaardingen 18-12-1877)

⁴⁴⁵ Breems W.C. den; *500 jaar den Breems*; p.22-26, Vlaardingen 1986 and Vellekoop Ingena; *Martinus den Breems en de visserij in oorlogstijd (1802-1806)*; NETwerk, tijdschrift van de Vereniging Vrienden van het Visserijmuseum; 2000, no.11, p.31-50 ISIS Martinus den Breems 27.08.1758-14.08.1811 ~ Jannetje Dorsman 09.09.1761-25.05.1801



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The sister to Jacob den Breems' wife married another ship owner and independent coppersmith, Johannes Conradus Voorbach.⁴⁴⁷ There may have been social or religious preferences within circles corresponding to the professional hierarchy, but because of the size of the town, friendships and love seemed to cross such preferences occasionally. The majority of the ship owners belonged to the Reformed church in Vlaardingen, while a minority joined the Catholic Church.⁴⁴⁸ When bookkeepers and ship owners reported their catch of cod to the king to obtain financial support, they reported the owner's name as well as the name of the vessel. Matching with skippers' names from the list on herring vessels departing the port of Vlaardingen, I show connections between ship owners, skippers and vessels fishing for cod. Not all vessels fishing for herring went for cod in Winter, leaving some uncertainty to the correspondence. The skippers usually started as young boys on the fishing vessels advancing as they grew up making relationships with the fellow crewmembers and the ship owner. Some showed more loyalty than others did, yet there are signs of co-operation between family businesses of skippers signing on vessels.

Skippers' network within the De Zeeuw family business

⁴⁴⁶ P0592-2 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Wilhelmina Schep (Vlaardingen 3-12-1799 – Vlaardingen 18-12-1877) Gehuwd met Jacob den Breems (Vlaardingen 27-8-1798 – Hof van Delft (Sions Lust) 20-5-1867)

⁴⁴⁷ Jacob den Breems 27.08.1798-22.05.1867 ~ Willemkje Schep 03.12.1799-.. and Johannes Conradus Voorbach 20.10.1804-? ~ Maria Schep 14.06.1806-? Stadsarchief Vlaardingen, ISIS

⁴⁴⁸ *De geboorte- huwelijks- en overlijdensregisters in de oude kerkboeken: DTB-registers* at Stadsarchief Vlaardingen

I have been able to trace five skippers of the five vessels fishing for cod, owned by the De Zeeuw family business.⁴⁴⁹ Cornelis van der Windt was a seaman, a mate and a skipper. He married Maria Groenendijk in 1794, who was a trader, and they had eleven children, two of whom died as youngsters. His six sons all became seamen, mates or skippers like their father, and two of them, Gerardus and Abraham, worked for De Zeeuw as well.⁴⁵⁰ The first mention of Cornelis van der Windt in the records studied is in 1818, but there is no reason to think he did not sail earlier, and if he was fifty by then his seafaring experience and his qualifications would have been obtained many years earlier. Why did he leave the vessel *Gelukkige Verandering* to his son Abraham by 1831? Did the De Zeeuws decide that there was good need for his experience and authority with the new crew on the new vessel *Jonge Dirk*, and that his son Abraham might benefit from taking over an experienced crew after his father on *Gelukkige Verandering*? Or, was Cornelis simply ready for retirement giving his son and his grandson Cornelis van der Windt an opportunity instead?⁴⁵¹ If comparing with his colleague skipper within the De Zeeuw business, Cornelis Rijke, we may find an answer. Cornelis Rijke was a mate and a skipper. He married Maria Roest with whom he had five children, three living to adulthood. Cornelis Rijke also must have sailed a vessel before my records provide evidence in 1818. He was forty by then, and he signed on as skipper at De Zeeuw's till he was sixty three years old in 1841. Cornelis van der Windt was sixty two years old when he quit *Gelukkige Verandering* in 1831. It seems more likely that Cornelis van der Windt quit in 1831 than continuing on *Jonge Dirk* for another six years. What we know for sure is that Cornelis' son Gerardus subsequently sailed *Jonge Dirk* for twelve years, until he suddenly died supposedly from cholera in 1849 at the age of thirty six, leaving his wife with two little children and the grief of two stillborn children. *Jonge Dirk* then continued fishing for cod with Pieter Ommering. Pieter was a seaman, a mate and a skipper. He married Elizabeth Bergwerf, a *boetster*, and they had four children.⁴⁵² Prior to working for De Zeeuw, Pieter Ommering fished for cod (and applied for financial support) from different vessels belonging to Hendrik de Jong for the seasons 1833-34, 1837-38, 1840 and 1845-48. Another seaman, mate and skipper, Jan van der Windt worked at Hendrik de Jongs. He was the brother of Abraham and Gerardus and it is likely via him that De Zeeuw got in contact with Pieter Ommering in the

⁴⁴⁹ See **The ship owners** on the skippers on the vessels fishing for cod owned by De Zeeuw

⁴⁵⁰ Cornelis van der Windt 16.07.1769-13.11.1840 ~ Maria Groenendijk 25.07.1773 and Abraham van der Windt 26.08.1805-17.02.1870 ~ Sijtje Brobbel 23.02.1804-26.06.1870 and Gerardus van der Windt 14.02.1813-07.06.1849 ~ Adriana Verweij 05.09.1815-16.03.1860 Stadsarchief Vlaardingen, ISIS see **Dutch cod fishing during the 1800s**, part **Reactions towards regulations and financial support**

⁴⁵¹ Abraham van der Windt's son Cornelis van der Windt 03.07.1825-27.04.1892 Stadsarchief Vlaardingen, ISIS he went fishing for cod at another ship owner J H Niermeijer from 1844-1852

⁴⁵² Pieter Ommering 07.06.1799-08.02.1869 ~ Elizabeth Bergwerf 18.04.1799-... Stadsarchief Vlaardingen, ISIS *boetster* meaning a woman repairing the fishing nets Bly Frans; Verklarende Vakwoordenlijst; Leuven 1931

urgent need of a skipper at the unforeseen death of Gerardus.⁴⁵³ Here, De Zeeuw benefited from the embedded ties of the social relations in the family network among seamen, mates and skippers, as they benefited from the family network among ship owners when *Gelukkige Verandering* was wrecked and they borrowed the vessel *Zelden Rust*.⁴⁵⁴

Skippers on vessels in the De Zeeuw family business network

If we look at one of the skippers at De Zeeuw, Cornelis Rijke and his family network, we see engagements matching the De Zeeuw family network. Cornelis Rijke, the mate and skipper on *Wisselvalligheid* and *Vrouw Neeltje* at De Zeeuw had a sister Dirkje, who married a seaman and a mate Jan Bos and had four children.⁴⁵⁵ Jan Bos fished for cod for fifteen years on the vessel *Zelden Rust* for Magteld van Arkel who then lent Neeltje Drop the vessel *Zelden Rust*. When Magteld van Arkel died and the vessel passed to De Zeeuw, Jan Bos signed onto the vessel *Vrouw Helena* fishing for cod for thirteen years at Sebastiaan Schadd, the son in law of Magteld van Arkel. Thereby, he kept working within the family business network. Cornelis Rijke's brother in law Jacob Roest was a seaman and a mate.⁴⁵⁶ He sailed three vessels that had new owners during his engagement. He fished for cod on *Het Schoon Verbond* that was owned by the widow of Gilles Hoogendijk from 1818-1819, by Jan Dorsman de Willigen from 1820-1825, and by Ijzerman & De Wolff from 1826-1835. In 1836, Jacob Roest signed on another vessel, *Jonge Johannes* at J. H. Niermeijer. He stayed with J H Niermeijer until 1843 fishing for cod on *Vrouw Petronella* from 1837. By 1843, he was sixty two years old and it was time for retirement. Jacob Roest had two wives and ten children, four of whom died as youngsters, and his second wife Willemetje was a *werkster* and a *naaister*, working as a domestic and a dressmaker. Dirk Roest, Cornelis Rijke's second brother in law, was a seaman, a mate and a skipper fishing for cod only in 1818-1819, on K van Rossen's vessel *Jonge Maarten*.⁴⁵⁷ If we look at Cornelis Rijk's professional network, we see employment of colleagues in a similar family business to De Zeeuw and in relation to it. Cornelis Rijke knew Gerardus van der Windt from working at De Zeeuw's. Gerardus' father in law, Jan Verweij was a seaman, a mate and a skipper. He fished for cod on vessels applying for support, belonging to the Dorsman ship owners' family business. He was with Klaas Dorsman & Zoon from 1825-1841, and then after Klaas' death in 1842 with his son Abraham Dorsman and his widow

⁴⁵³ Jan van der Windt 24.07.1803-10.05.1885 ~ Jannetje Ligtermoet 10.08.1804-02.11.1850 and ~ Cornelia Middendorp 20.09.1813-19.08.1852 Stadsarchief Vlaardingen, ISIS sailed on Hendrik de Jong's vessel *Zeelust* fishing for cod from 1827-1838 and in 1841

⁴⁵⁴ Uzzi Brian; *The Sources and Consequences of Embeddedness*; 2000

⁴⁵⁵ Jan Bos 25.07.1792-.. ~ Dirkje Rijke 26.06.1785-02.12.1853 Stadsarchief Vlaardingen, ISIS

⁴⁵⁶ Jacob Roest 01.01.1781-10.01.1854 ~ Jannetje Johanna Schippers ..-21.05.1824 and ~ Willemetje Valkenier 12.03.1788-22.08.1859 Stadsarchief Vlaardingen, ISIS and Bly Frans; *Verklarende Vakwoordenlijst*; Leuven 1931

⁴⁵⁷ Dirk Roest ...-13.04.1833 ~ Reimpje Rijke 15.08.1779-09.08.1832 Stadsarchief Vlaardingen, ISIS

from 1843-1852.⁴⁵⁸ When Jan Verweij signed on the vessel *Haring & Kabeljaauwvisserij* he took over after mate Maarten den Breems who fished for cod on the same vessel from 1825-1828.⁴⁵⁹ Maarten den Breems shifted to the vessel *Stede Vlaardingen* instead from 1829-1840. He married Elizabeth van der Bendt and had five children. His mother Jannetje Dorsman was Klaas Dorsman's sister and Abraham Dorsman's aunt. Maarten benefitted from his family network, as did his brothers Jacob den Breems who had become a ship owner, and Abraham den Breems who was a skipper and fished for cod on another vessel owned by their uncle Klaas Dorsman. Their fourth brother Arie den Breems, who was a seaman and married to Marie Kok, died at sea. He just fished for cod in 1821 on Betz & De Willigen's vessel *Werflust*.

Dispersion of family members within fishing business

The fishers and the ship owners sought employment within their close network and family relations, reinforcing local norms and traditions. Klaas Dorsman encouraged his nephew Jacob den Breems to become a ship owner, but Jacob did not engage any of his own brothers as skipper on his fishing vessel *Martinus* during the time 1833-1852. Jacob signed on Willem van der Velden, who was a seaman and a mate, fishing for cod on *Martinus* from 1834-1839.⁴⁶⁰ Jacob den Breems and Willem van der Velden did not have a mutual family network, nor did Jacob den Breems and Willem van der Brugge who fished for cod on *Martinus* in 1840. However, Joris de Hoog Don, who was a mate and a tradesman, and fished for cod on *Martinus* at Jacob den Breems from 1841-1850, married Jacob den Breems' cousin Alida Borsboom, the daughter of his father's sister, Cornelia den Breems. Alida worked as a *boetster* and a *winkelierster* repairing fishing nets and trading, and she and Joris had seven children, five of whom survived childhood.⁴⁶¹ Joris' brother Jan Don was a seaman and a skipper. He married Dirkje Borsboom and fished for cod on the vessel *Vrouw Neeltje*, which was from 1818-1824 owned by the widow of Jacob Bubbezon, in 1829 by Pieter Bubbezon, and from 1831-1839 by the company De Zeeuw & De Vlaming.⁴⁶² Joris de Hoog Don's second brother Gerrit Don fished for cod on the

⁴⁵⁸ Klaas Dorsman 04.06.1758-07.12.1842 ~ Johanna van der Endt 09.03.1758-11.11.1827 and Abraham Dorsman 31.08.1788-29.05.1846 ~ Johanna Hoogwinkel 18.02.1787-03.02.1868 Stadsarchief Vlaardingen, ISIS see Appendix 43 note .. and 432

⁴⁵⁹ Maarten den Breems 06.10.1794-... ~ Elizabeth van der Bendt 03.10.1795-05.05.1833 and Abraham den Breems 01.01.1792-13.12.1843 ~ Geertruij Kalisvaart 06.02.1791-11.02.1851 and Arie den Breems 14.06.1786-.. ~ Marie Kok 15.01.1786-01.07.1826 Stadsarchief Vlaardingen, ISIS

⁴⁶⁰ Willem van der Velden 16.09.1804-.. ~ Catharina Smits 15.04.1802-.. and Willem van der Brugge ... Stadsarchief Vlaardingen, ISIS

⁴⁶¹ Joris de Hoog Don 02.06.1791-26.01.1870 ~ Alida Borsboom 18.11.1792-31.01.1856 and Jan Don 05.08.1787-.. ~ Dirkje Borsboom 05.07.1789-08.09.1849 and Gerrit Don 13.06.1784-21.12.1866 ~ Alida Ijdo 06.08.1788-13.04.1829 ~ Maria de Willigen 31.07.1804-06.12.1847 and Jacob Don.. Stadsarchief Vlaardingen, ISIS

⁴⁶² Hendrik Drop de Zeeuw's family in law, see **The De Zeeuw family business**, part on **The sidelines**

vessel *Jonge Alida* at J Dorsman de Willigen from 1818-1821. Gerrit was a seaman, a mate, a captain in the merchant fleet and a *rentier*. He married twice and had eleven children, one of whom was stillborn. Joris' nephew Jacob Don continued family traditions and fished for cod on the vessel *Het Vertrouwen* at Pieter van der Drift and his widow 1821-1831 and on the vessels *Jonge Willem* and *Jonge Maarten* from 1832-1833, 1837 at Wouter van Rossen & zoon. If possible and convenient, the ship owners and skippers maintained an enduring engagement, while norms and traditions emphasized a certain degree of independence by ensuring a fair dispersion of family members in the business.

Skippers' family network in the *partenrederij* and the limited company

Hendrik Kikkert started business as ship owner at the beginning of the 1800s like Jacob den Breems. Hendrik Kikkert had a bookkeeper's background whereas Jacob den Breems had a seaman's background.



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Hendrik Kikkert had two vessels fishing for cod from 1832-1852 signing on five skippers. Frans Ommering fished on *Nijdere Visscher* in 1834 after having fished at Francois van der Elst for six years.⁴⁶⁴ Unfortunately, *Nijdere Visscher* was wrecked and Frans Ommering died at sea in January 1835, leaving his wife with seven children. Hendrik Kikkert had another vessel *Volharding* signed on by seaman, mate and skipper Hermanus Schouten. Hermanus married twice, had five children and stayed fishing for cod for Kikkert's for nineteen years. Hendrik Kikkert also engaged Hermanus' brother Leendert

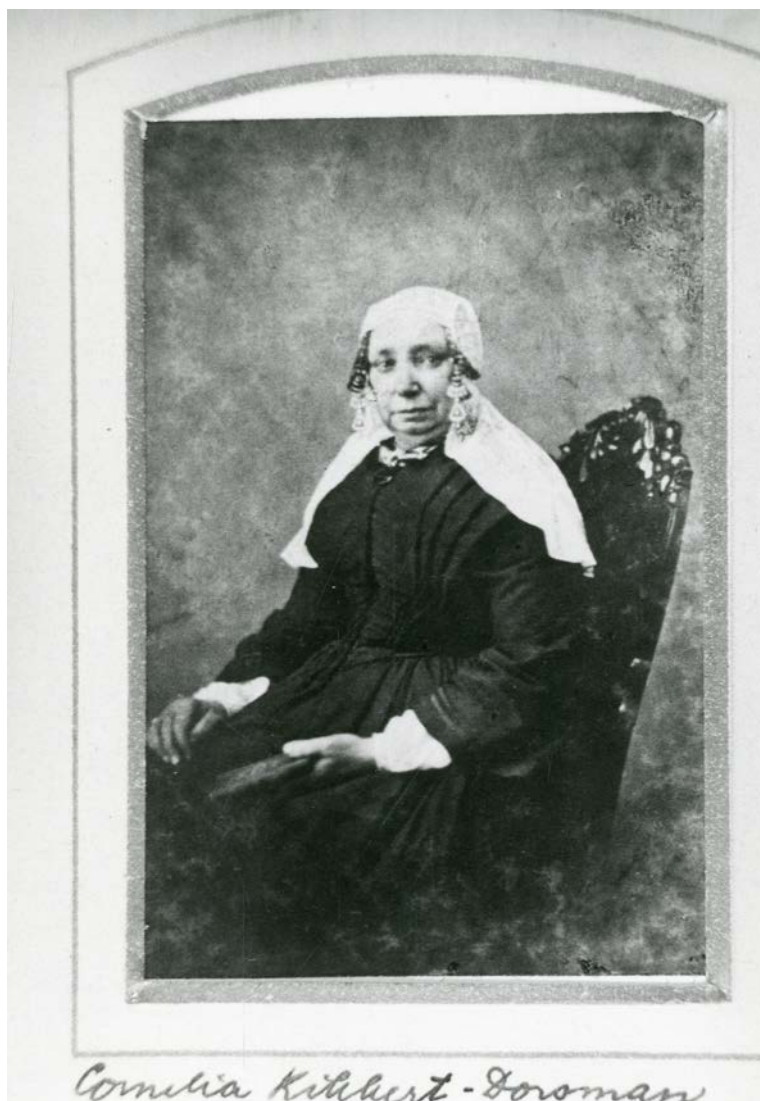
⁴⁶³ P0285 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Hendrik Kikkert (Leiden 24-9-1798 – Vlaardingen 5-9-1863) Huwelijksdatum 29-5-1822 Vlaardingen met Cornelia Dorsman (Vlaardingen 22-3-1800 – Vlaardingen 29-12-1875)

⁴⁶⁴ Frans Ommering 31.08.1788-01.1835 ~ Annetje van Leeninge 04.03.1792-08.09.1849 Stadsarchief Vlaardingen, ISIS

Schouten who was a seaman and a mate and stayed fishing for cod for eighteen years.⁴⁶⁵ In 1848, Hendrik Kikkert sent his son Cornelis Kikkert on a fishing trip on the vessel De Toekomst fishing for herring. Cornelis kept a diary telling how several vessels from Vlaardingen went along anchored together in a bay near the Shetland Islands, preparing for next days fishing. Maarten den Breems, the skipper of Klaas Dorsman's vessel Jonge Abraham, invited Cornelis Kikkert and Hermanus Schouten over for pancakes. Pancakes were a usual meal, but perhaps paying a visit in good weather was a special gesture to Cornelis Kikkert, as Cornelis Kikkert and Maarten den Breems were cousins, and family ties were important.⁴⁶⁶

⁴⁶⁵ Hermanus/Harremanis Schouten 19.03.1805-.. ~ Maria van Straaten 12.12.1784-10.01.1845 ~ Henderina van Luik 09.01.1818-.. Henderina married Hendrik Don, Joris de Hoog Don's son, in 1841, but unfortunately he died at sea in 1843, so she remarried in 1849. Leendert Schouten 04.08.1806-06.06.1859 ~ Anna Sitton 27.09.1805-... Stadsarchief Vlaardingen, ISIS

⁴⁶⁶ Borsboom P.; Het journaal van een zeereis uit 1848 door Cornelis Kikkert (1829-1917); NETwerk, 1992, vol.3, p.42-52



In 1852, Hendrik Kikkert rigged a third vessel for cod with Pieter Strijbus as mate. Pieter Strijbos was from Maassluis and married to Lijntje Graaf from Zierikzee.⁴⁶⁸ The Schouten brothers came of a skipper's family in Vlaardingen. Hermanus' and Leendert's father, the seaman, mate and skipper Willem Schouten married Gerritje van Luijk and had ten children, six sons and four daughters. Interestingly, another son, Jacob Schouten, a seaman, mate and skipper went fishing for cod on the vessel *Nijverheid* at the limited fishing company *Rederij de Hoop* from 1831-1852.⁴⁶⁹

⁴⁶⁷ P5321 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Cornelia Dorsman (Vlaardingen 22-3-1800 – Vlaardingen 29-12-1875) Huwelijksdatum 29-5-1822 Vlaardingen met Hendrik Kikkert (Leiden 24-9-1798 – Vlaardingen 5-9-1863)

⁴⁶⁸ Pieter Strijbus ..-03.10.1856 ~ Lijntje de Graaf 31.03.1804-20.08.1881 Stadsarchief Vlaardingen, ISIS

⁴⁶⁹ Willem Schouten 22.06.1777-20.06.1866 ~ Gerritje van Luijk 18.01.1784-11.11.1847 and Jacob Schouten 23.11.1803-.. ~ Jannetje Blijenburg 19.12.1806-02.12.1855 ~ Maria Brouwer 11.04.1811-.. Stadsarchief Vlaardingen, ISIS. Kikkert and the Schouten skippers are mentioned in Poulsen Bo; Historical exploitation of North Sea herring stocks; chap.7, p.94-116



The remaining Schouten brothers did not fish for cod (applying for financial support), but Willem Schouten fished for cod on *Nieuwland* from 1818-1821 at Hoogendijk, Betz & De Willigen, where Hendrik Kikkert's father worked as bookkeeper. Hoogendijk, Betz & De Willigen was the originator of the limited company *Rederij de Hoop*, and connections between the ship owners, the limited company and Hendrik Kikkert's father probably brought about the signing on of the Schouten skippers. *Rederij de Hoop* did not sign on any other members of the Schouten family. Apart from the vessel *Nijverheid*, the company rigged up three vessels: *Vrouw Anna Elisabeth*, *Tot nut van het Algemeen* and *Noordzee*.

⁴⁷⁰ S0060 Collectie Museum Vlardingén; Watercolour titled "Dit wel gebouwt hoekerschip genaamd de Nyverheit is aangelegt in het jaar 18-30 en wert gevoert door schipper Jacob Willemse Schouten" signed by A S (Ary Storm), circa 1830

Jan Schep was seaman and mate and fished for cod on *Vrouw Anna Elisabeth* and *Tot nut van het Algemeen* from 1825-1829. He had already fished for cod on this vessel at Klaas Betz from 1823-1824, indicating the origin of the company. Jan Schep died at sea at Doggerbank in 1830, just thirtyfour years old leaving his wife and his daughter.⁴⁷¹ Arie van Rooijen fished for cod on the vessel *Noordzee* from 1830-1838. Arie was seaman, and mate and married to Geertruij Poot with whom he had two children. He too died at sea in the North Sea.⁴⁷² The seaman and mate Jan Rijke Roest continued fishing on *Noordzee* from 1839-1850. Jan married Trintje de Gorter Ommering and had eight children five of whom died as youngsters.⁴⁷³ In 1852, Dirk Liscet fished on *Noordzee*. Dirk too was seaman, and mate and married to Maria van Berkel. They had seven children, five reaching adulthood.⁴⁷⁴ Compared to the Schouten skippers, the remaining skippers at *Rederij de Hoop* most likely knew each other, but they do not seem to have had close family relations, nor did they engage at the *rederij* for as long.

The importance of norms and local identity (and authorities)

Why did people trust each other?

It was during the second half of the 1800s that the seamen, mates and skippers began signing off the vessel by the end of season or even when in port at the end of a fishing trip. There are few such stories concerning cod fishing during the first half of the 1800s as ship owners facilitated the introduction of a new law on fishing in 1801, reintroduced in 1818, punishing desertion. It is fair to say that similar problems occurred in Dutch cod fishing before the French occupation, and it all depended on

*“...how a group of principals who are in an interdependent situation can organize and govern themselves to obtain continuing joint benefits when all face temptations to free-ride, shirk, or otherwise act opportunistically.”*⁴⁷⁵

The answer to this question lies in the trust and reciprocity among family members in the Dutch fishing business. Through the centuries of continuous fishing ways of doing things was passed on from the skipper to the able seaman and from father to son forming norms of fishing and living in the fishing community. Family members facilitating kinsmen's

⁴⁷¹ Jan Schep 26.01.1796-1830 ~ Geertje van der Borden 22.01.1798-08.01.1878 Stadsarchief Vlaardingen, ISIS - Jans sister Willemetje Schep married one of the Breems brothers: Jacob den Breems

⁴⁷² Arie van Rooijen ..-12.05.1845 ~ Geertruij Poot 24.09.1780-06.04.1846 Stadsarchief Vlaardingen, ISIS

⁴⁷³ Jan Rijke Roest 03.09.1817-.. ~ Trintje de Gorter Ommering 31.08.1816-.. Stadsarchief Vlaardingen, ISIS

⁴⁷⁴ Dirk Liscet 28.08.1797-28.05.1859 ~ Maria van Berkel 26.04.1798-08.11.1876 Stadsarchief Vlaardingen, ISIS

⁴⁷⁵ Ostrom Elinor; *Governing the Commons*; p.29 and Kuiper Marco; *Vissers en Ventjagers*; p.15-16 and Ligthart A.G.; *De Vlaardingers en hun Haringvisserij*; 57-60

positions in fishing business; be it mates, skippers or ship owners were aware they must take care when fishing if they wanted fish in the sea to catch for future generations. They knew the abundance of fish fluctuated, and for everybody to have his share and for every generation to have a career in fishing business, moderation must exist. Therefore, the ship owners set up rules to comply with and means of control enforcing their rules, fishing accordingly for generations inspiring solidarity. They agreed on long line cod fishery in the North Sea from November to April, off the herring season. The mutual recognition of the rules manifested by local control of a proper rigging when leaving port for fishing and an accountable catch when landing at port. They made sure fines imposed for any failure of the control at port supported social objectives within the community. In Vlaardingen and Maassluis, the fines supported the orphanages taking care of and educating orphans of fishers wrecked at sea, lacking their personal and professional mentor in life. They also supported widows of fishers and paid pensions to retired fishers. It may not have been difficult to circumvent the control, but the consequences of eventual exclusion from the social network among the families, losing the group identity, was extensive.⁴⁷⁶ Therefore, groups of principals organized and rejected temptations to freeride.

The importance of reciprocity

Concern for the well-being of the employees became acute in 1831, as a cholera epidemic approached.⁴⁷⁷ *Kollegie van de Ijslandse Kabeljauwvisserij* wrote the head of the marine in July, saying no measures had been taken against infection along the coast, yet they felt a need for protection and advice. The *Kollegie* members knew, the vessels currently at sea fishing were not isolated at sea. The crew might trade with foreign vessels or render assistance to colleagues, and they feared a risk of infection. They explained that some vessels were off for two-three months, while others caught turbot specifically for the English market, and thereby frequently exposed themselves to the risk of infection. The coastal fishers landing their catch in different coastal towns also exposed themselves to the risk of infection.⁴⁷⁸ When receiving the letter, the head of the marine immediately made a decision, imposing strict referral and eventual quarantine at all arrivals at port.⁴⁷⁹ During summer, these interventions implied the coastal fishery and the Iceland fishery. Neither the head of the marine nor Jan de Willigen or Adrianus de Jongh informed the *Kollegie* members representing the towns of Pernis, Zwartewaal and Middelharnis, to which the coastal fishery belonged, before executing the interventions. The coastal seamen usually

⁴⁷⁶ Soeteman A.; *150 Jaar Sociale Zorg in Vlaardingen 1795-1945*; Zuid-Hollandse Studien, deel X, p.10, Historische Vereniging voor Zuid-Holland, 1962

⁴⁷⁷ Nationaal Archief 3.11.05 inv.1 p.294, 302-305. Cholera was a "new" illness in Europe at the time, originating in India

⁴⁷⁸ Nationaal Archief 3.11.05 inv.17 p.546-548

⁴⁷⁹ Nationaal Archief 3.11.05 inv.17 p.550-551

went fishing for a week at a time. In spite of the protective effect of the precautions initiated, the ship owners became less enthusiastic as expenses accumulated and they must pay the doctor themselves. The *Kollegie* member in Pernis calculated the charge per vessel fishing along the coast: three guilder per vessel and one guilder per man on board, making a total of twenty-one guilder per vessel per week! This hardly left any income for the ship owners or the fishers.⁴⁸⁰ In autumn, the perception of the marginal utility of protection changed as the quarantine was lifted for the winter cod fishery facilitating their to and fro with cod.⁴⁸¹ Jan de Willigen deliberately asked the head of marine for an exception from the quarantine and charge as the winter cod-fishing season began in November-December 1831. He argued that the *beugvisserij* took precaution and hardly met any other vessels at Doggerbanke in the North Sea during winter - plus the vessels usually carried 2-300 cod alive in the bun basin that might die in case of quarantine! They must be thought of as well as the survival of the fishers. Jan de Willigen suggested, the flag indicating salt was on board, signalled the exception from quarantine to the marine officials in port.⁴⁸² The head of marine accepted the proposal, but he had difficulties expelling the coastal fisheries, like he had difficulties telling them to pay the charge when excepting the winter cod fisheries. Therefore, the quarantine was lifted. Coincidentally, the year 1832 evoked a larger epidemic of cholera in the Netherlands.⁴⁸³ Not until the large epidemic in 1849 did the ship owners in Vlaardingen comment on restrictions caused by disease; they complained about poor marketing possibilities and low price on cod.

A common responsibility

Apart from being concerned about their own family business, the ship owners must engage in the maintenance of the harbour and its outfall to the river. Usually, a percentage of their revenue from fishing was forwarded to the municipal council's maintenance costs.⁴⁸⁴ In 1827, some ship owners from Middelharnis asked the king for permission to establish a fund, based on a fixed percentage of his support to the North Sea cod fishery. The interest of the foundation was to save money for a new harbour. Unfortunately, this was not the idea of the king's support to the ship owners, and there was a debate first of who was responsible in the *Kollegie* and/or the municipal council and second if there was

⁴⁸⁰ Nationaal Archief 3.11.05 inv.17 p.552-553, 555-556

⁴⁸¹ Nationaal Archief 3.11.05 inv.17 p.554 Pedersen, Madsen, Nielsen; Økonomisk Teori i internationalt perspektiv; chap.9

⁴⁸² Nationaal Archief 3.11.05 inv.17 p.563-565, 570-571

⁴⁸³ Jacobi H.; *De Cholera in Noord-Holland; Verschillende bijdragen voor de geschiedenis der cholera in Nederland*; Nederlands tijdschrift voor geneeskunde; vol.2, p.117-43, 1867. This article paid attention to repeatable attacks of cholera in coastal areas, including Southern Holland

⁴⁸⁴ Nationaal Archief 3.11.05 inv.1 p.228-234. Sigal M.C.; De Drie Maassteden, Schiedam Vlaardingen Maassluis; p.90, Albert de Lange, Amsterdam 1948

a need for such investment.⁴⁸⁵ What was so special about the fund was that it avoided the problems of vessels landing their catch elsewhere, but their hometown, preferably Vlaardingen, and thereby missing the maintenance costs of their homeport.⁴⁸⁶ The Vlaardingen ship owners thought the Middelharnis harbour needed only upkeep, not renewal, but how did they know? Was it out of fear of a potential competitor? Geographically, Middelharnis had better access to the sea than Vlaardingen and to the southern hinterland, alias the Belgian market. By supporting the king's refusal of the new fund in the *Kollegie*, Vlaardingen manifested its status as a major fish market. Still, the difficulties of the silting of the Maas river near Vlaardingen were not overcome. When tides got low, storms got hard or temperatures fell below zero the vessels could not get up or down the river. Several times they were either stuck and missed days of fishing or they landed their catch in the coastal towns, or they sank.⁴⁸⁷ Everybody had an interest in an easy way to sea, but few felt responsible for the improvements necessary to the public good. The seamy side of the social network was its strong attachment to the local community. By 1854, a group of ship owners in Vlaardingen wrote the council on the worsening of the general conditions in fishing including the silting of the river and the port, suggesting a repair work. They estimated a cost of twenty thousand *guilder*, obtained by collecting a *zandgeld* along with the usual *havengeld* from vessels calling at their port; excepting small vessels with no need for deepening. The ship owners mentioned the port at Middelharnis as an example, admitting they managed in spite of the rejection in 1827.⁴⁸⁸

Close or peripheral relations among skippers working for the same ship owner

The ship owner having the most vessels practising *beugvisserij* was Simon van Gijn. He and his son had on average between two and three vessels fishing for cod each Winter from 1818-1847.⁴⁸⁹ Huibregt Bobbel fished for cod on Simon van Gijns vessel *Vrouw Maartje* in 1818. Huibregt came of a skippers' family in Vlaardingen, one of his sisters Sijtje Brobbel married Abraham van der Windt.⁴⁹⁰ Sadly, his father died when fishing for herring in a bay at the Shetland Islands in 1829. It might have been his father or it might have been Huibregt's brother Jacob Brobbel who fished for cod on the vessel *Vrouw*

⁴⁸⁵ Nationaal Archief 3.11.05 inv.13 p.244-248 The president of the committee for cod fishery, Jan de Willigen from Vlaardingen constituted the impartial commission investigating the relevance of the fund. He was personally (s)electd by the minister of the interior...

⁴⁸⁶ Nationaal Archief 3.11.05 inv.1 p.234.

⁴⁸⁷ Nationaal Archief 3.11.05 inv.1 p.48-49, 147-50, 214-16, 247-50, 261-64, 272-75, 295-300, inv.2 p.42-47, 51-53, 58-60, 64-77, 79-82, 84-88, 112-120, 209-212, 213-218, 227-230, 247-252. and Callahan Maureen; *The Harbour Barons*; vol.1, p.1-11 not only the cod fishers had problems navigating the Maas

⁴⁸⁸ Struijs Matthijs A.ed.; *Adres van de reders ter koopvaardij aan het Gemeentebestuur van Vlaardingen*; Om een bevaeren schip te maecken; appendix 1, p.183 Hendrik Kikkert, Hendrik Drop de Zeeuw, and A. de Zeeuw were among the ship owners signing the letter to the council.

⁴⁸⁹ See **Joint companies of father and son** on the vessels of Simon van Gijn & zoon

⁴⁹⁰ Huibregt Brobbel 30.10.1791-.. Stadsarchief Vlaardingen, ISIS

Maartje from 1819-1820. If the brother or the father he continued fishing for cod at the ship owner H P van der Drift. So did the next skipper on the vessel *Vrouw Maartje*, Andries Hogerwerff. He stayed with Simon van Gijn in 1821, but when he fished for cod next it was with H P van der Drift. Simon van Gijn did not use *Vrouw Maartje* for cod fishery again. Instead, the seaman and mate Andries van Berkel fished for cod at Simon van Gijn for fourteen years, first on the vessel *Hugo en Pieter* from 1818-1819, then on *Jonge Maartje* from 1820-1831. Andries married Elisabeth van der Gaag and had seven children; he probably retired in 1831, being sixtyone years old.⁴⁹¹ Maarten van der Meijden was a seaman and mate, and married to Maria de Bruijn. He took over *Jonge Maartje* and the cod fishery from 1833-1838.⁴⁹² Simon van Gijns fourth vessel fishing for cod was *Hersteld Nederland*, and from 1818-1827 Gerrit Verboom sailed it. Gerrit Verboom was a seaman and a mate and married to Maria de Ligt.⁴⁹³ So far, one must seek the mates and skippers' mutual family relations among employees at different ship owners not presented here, but this changed. Jacob Spanjersberg was a seaman, a mate, a shipping captain and a rentier. He fished for cod on *Hugo en Pieter* from 1820-1824. He had two wives, Lena Hofman and Pleuntje Westerdijk.⁴⁹⁴ Fishing for cod on *Hugo en Pieter* from 1825-1828, came Pieter Don. He switched to the vessel *Hersteld Nederland* from 1829-1833, and to *Cornelia Johanna* from 1834-1847. Overall, Pieter Don fished for cod at Simon van Gijn for twentytwo years. Pieter Don was the cousin to Joris den Hoog Don. He was a seaman and a mate and married Maartje Hofman, Lena's sister, and they had two sons. Pieter's sister Willemetje Don married Jacob Spanjersberg's brother, Huigo.⁴⁹⁵ Jacob's sister Alida Spanjersberg married the seaman and mate Teunis Boon who sailed *Hersteld Nederland* in 1828, *Hugo en Pieter* from 1829-1833 and *Aan Ijver Vruchtbaar* from 1834-1839.⁴⁹⁶ He and Alida had four children, but she died after giving birth to the fourth child. Teunis then married Annetje den Boogert, and she gave birth to one child, but they both died shortly after. Teunis married a third time with Neeltje Boon and they had two children. Emotionally, it must have been hard, but there was no choice if life was to continue; the family needed a woman, especially when the man was off to sea most of the time. Simon van Gijn had a sixth vessel fishing for cod called *Kleine Zonen*. Jacob Spanjersberg's

⁴⁹¹ Andries van Berkel 29.07.1770-03.09.1850 ~ Elisabeth van der Gaag 06.08.1775-14.10.1818 Stadsarchief Vlaardingen, ISIS

⁴⁹² Maarten van der Meijden 15.05.1796-... ~ Maria de Bruijn 17.09.1801-19.09.1857 Stadsarchief Vlaardingen, ISIS

⁴⁹³ Gerrit Verboom ...-14.04.1845 ~ Maria de Ligt ...-05.05.1859 Stadsarchief Vlaardingen, ISIS Either Simon van Gijn's son and/or widow was in charge of the business from 1833, when Simon died, see **Joint companies of father and son**

⁴⁹⁴ Jacob Spanjersberg 15.03.1789-23.03.1857 ~ Lena Hofman 26.08.1792-19.09.1835 ~ Pleuntje Westerdijk 08.11.1798-18.03.1876 Stadsarchief Vlaardingen, ISIS

⁴⁹⁵ Pieter Don 11.01.1797-09.02.1883 ~ Maartje Hofman 05.09.1797-... Stadsarchief Vlaardingen, ISIS

⁴⁹⁶ Teunis Boon 18.12.1798-06.09.1857 ~ Alida Spanjersberg 28.12.1802-09.05.1833 ~ Annetje den Boogert 20.08.1808-30.11.1835 ~ Neeltje Kornelia Boon 21.06.1798-13.07.1870 Stadsarchief Vlaardingen, ISIS

second wife's brother, the seaman and mate Hendrik Westerdijk sailed *Kleine Zonen* in 1833, and *Hugo en Pieter* from 1834-1836. Hendrik married Piertertje Wapenaar and they had ten children, three of whom died as youngsters, leaving one daughter and six sons, four becoming seamen like their father. Piertertje was a *nettenboetster* and a *nettenbreister*, knotting and repairing the nets.⁴⁹⁷ The skippers at Simon van Gijn's fall into two groups: the ones with a close network of relatives and long berth, and the ones with a loose network and short berth. It was usual; the skippers at Den Breems parted in a similar way, creating a stable business holding development potential and social responsibility.⁴⁹⁸

Dutch cod fishers

Becoming a fisher

In 1800, vessels fishing for cod at sea employed twelve men including the skipper, the mate, and the boy. Being a skipper or a mate meant having been a boy and a seaman advancing by learning by doing; an apprentice leading to different positions depending on what the man aimed at and was capable at. In 1828, national standards were set for the able seamen's education. The government engaged a committee to make a report. Subsequently it asked the *Kollegie van de Ijslandse Kabeljaauwvisserij* for its opinion on the report.⁴⁹⁹ The impression was positive, but they were aware the government sought inspiration in the United Kingdom and the United States, and they were afraid if what was being implemented was relevant to the merchant navy more so than the fishing fleet.⁵⁰⁰ Somehow, the *Kollegie* did not comply with topics like mathematics, geometry or navigation. The *Kollegie* wrote the minister of industry in charge, emphasizing the practical aspects of fishing, and the involvement of all members onboard irrespective of age or experience. This, they thought, was of higher value to their profession than the theoretical education. They then emphasized the size of the crew and the fishing vessels indicating the difficulties of additionally taking on board an apprentice, as suggested. Much to their surprise, it did not convince the authorities, and new standards were set, but there was no need to fear, as the subjects were optional and only marine candidates and pilots required

⁴⁹⁷ Hendrik Westerdijk 28.04.1801-02.08.1863 ~ Piertertje Wapenaar 18.02.1804-19.03.1863 Stadsarchief Vlaardingen, ISIS see Bly Frans; *Verklarende Vakwoordenlijst*; Leuven 1931

⁴⁹⁸ Uzzi Brian; *The Sources and Consequences of Embeddedness*; 2000 and Penrose Edith; *The theory of the growth of the firm*; p.41-42 and **A cumulative process**

⁴⁹⁹ Nationaal Archief 3.11.05 inv.1 p.252-60, inv.14 p.276-279, 280-325 for a translation of the report see Appendix 15 note 499

⁵⁰⁰ Nationaal Archief 3.11.05 inv.14 p.403-425, 451-454 i.e. Steel D.; *The Ship*; Longman, London 1828

the exam.⁵⁰¹ The authorities accepted a continuation of the traditional apprenticeship onboard the fishing vessels, in combination with elementary skills acquired at school, or at the orphanage.⁵⁰² Most ship owners engaging in cod fishery also engaged vessels in merchant shipping.⁵⁰³ Why they did not apply the new approach to fishing had to do with norms and tradition. For centuries, the Dutch church held the social responsibility in society, taking care of widows, orphans, disabled, elderly and people who were for some reason and for shorter or longer periods of time incapable of making a living.⁵⁰⁴ Fishers out of season were such people. The church gained money for its aid from the collection box. When fishing business went well, donations were adequate, but when fishing went badly, donations were insufficient. The men at the municipal council in Vlaardingen liked that the money they donated helped the fishers and their families, not least the sons and coming fishers. From the beginning of the 1700s, they began engaging in the social aid of the church, especially the education of the orphans, and disagreements arose with the church on who was to decide what, when. From 1815, education was divided into three: elementary school, practical school and Christian school. At the elementary school, the children learnt to speak, read, write and calculate. At the practical school, the children made fishing nets for the ship owners, and at the Christian school, the children went to church on Wednesday and Sunday. The combined management of social aid lasted until 1856. It may explain the reaction by the *Kollegie* towards the new maritime educational standards in 1828. There is no evidence any of the fishing committee members asking the captains or the seamen of their opinion, but there is evidence of an easy advancement for sons of skippers or ship owners.⁵⁰⁵ Nevertheless, life of the Dutch skippers and apprentices was very different from that of the English and American. There was no mention of punishment or threat in the Dutch regulation, whereas the English regulations presented to the committee held a punishment to just about every rule applied to skippers and apprentices. The Dutch regulation paid attention to the personal interests of all parts involved while the English assured the ship owner and the state an economically efficient production, benefitting the most from the human variable factor of production.⁵⁰⁶

Being a fisher

⁵⁰¹ Davids C. A.; Het zeevaartkundig onderwijs voor de koopvaardij in Nederland tussen 1795 en 1875. De rol van het Rijk, de lagere overheid en het particuliere initiatief; Tijdschrift voor Zeegeschiedenis, Symposiumnummer, december 1985, p.164-190

⁵⁰² Davids C. A.; Het zeevaartkundig onderwijs voor de koopvaardij; p.172-73

⁵⁰³ Nationaal Archief 3.11.05 inv.1 p.256. and Buisman H; De Vlaardingse Koopvaardij in de tweede helft van de 19e eeuw; p.85-102, ??

⁵⁰⁴ Soeteman A.; 150 Jaar Sociale Zorg in Vlaardingen 1795-1945; Zuid-Hollandse Studiën deel X, chap.1-2, Historische Vereniging voor Zuid-Holland, 1962

⁵⁰⁵ Kolff Nans; Zeevisserij Maassluis; Rijksuniversiteit Leiden, 1978 p.12

⁵⁰⁶ Nationaal Archief 3.11.05 inv.14 p.403-425

There is evidence that ship owners personally set up rules on the fishers's behavior when at sea fishing. The rules punished the fishers financially in case they fought, got drunk, fell asleep while on watch or disobeyed, but they also ensured the fishers proper food, prayers on Sundays when at sea, and the right to complain to the Dutch consul in case of mistreat or violence by the skipper.⁵⁰⁷ The ship owners hardly ever mention fishers causing problems in relation to fishing, instead they mention fishers leaving the business and difficulties signing on crew. It was the skipper's job to ensure that the crew he signed on had not already signed on elsewhere. This excessive flexibility of the fishers was mentioned in the law on fishing in 1801. If the fisher was late for work his pay was reduced, and if he did not show up at all he lost his possessions on board and had a fine of twentyfive *guilder*. If the fisher signed on the same fishing vessel for more than one trip in a row, one quarter of his wage might be withheld during the subsequent trip.⁵⁰⁸ The paragraphs indicate a change in crew succeeding each trip to sea, but although the sources on fishers are scarce they show that if any changes in signing on or off they occurred at the end of season; not at the end of each trip. Living on board the fishing vessel during winter fishing for cod must have been freezing cold and hard. What is mostly known today of the *beugvisserij* is the biting of the bait; a job for the young boys onboard. The bait was kept alive and just before baiting the hooks the boys must bite off the head of the little fish still alive. The fishers thought this made them the most attractive to the cod they wanted to catch. Maybe this was why the fishers fishing at sea started the day with only a piece of bread and butter and a cup of coffee? After placing all the baited hooks and the long lines on the seabed waiting for the cod to bite, the fishers had lunch consisting of peas or beans and dried or salted fish; twice a week they had pork. Then they started drawing in the lines curing and salting the cod in barrels and when they were done, they had dinner: fresh fish, bread, butter and cheese. They always drank beer and sometimes liquor. Then they went to bed that is they slept in hammocks in the front of the vessel; the skipper and the mate in the rear. It was acceptable in the seagoing *hoeker* and later *sloepen* vessels, but in the open coastal *bom* vessels, you understand why they did not fish for more than one or two days. The coastal fishers mainly used their *bun* basin to keep the fish fresh, fishing for cod and shelfish, as well as flatfish such as plaice, sole, dab and

⁵⁰⁷ The ship owners Kwak & zoon from the fishing town Zwartewaal set up rules for their fishers see Vries Nico de; De vergeten geschiedenis van Zwartewaalse vissers' in verre oorden. De koopvaardij schepen van Zwartewaal; De spreekbuis: officieel orgaan van de Vereniging van Oud-Studenten van het Hoger & Middelbaar Zeevaartonderwijs, Rotterdam & Omstreken, 204 vol.87, p.23-25

⁵⁰⁸ Vermaas J.C.; De Haringvisserij; p.44-45 according to article 44-47 in Publicatie van het uitvoerend bewind der Bataafsche Republiek houdende ordonnantiën en maatregelen conceerneende het vangen, zouten, havenen, keuren, pakken, ophoogen en leggen van den hareng; Gearresterd den 28 July 1801 The law of 1801 was replaced first by the French occupants' law and then by king Willem I's law on cod fishing in 1818. By then, the fisher was assured his wage at the latest three days after landing the catch see article 29 in besluit van 05.27.1827 no.20 according to law of 12.03.1818 no.15

turbot using respectively *beugline* and *schrobnet*. The coastal fishers did not believe in the importance of baiting the hooks using live baits; retired fishers prepared the *beuglines* before departure. Neither the fishers's diet nor the working conditions seemed to change much during the 1800s.⁵⁰⁹ An official report on the general living conditions onboard Dutch fishing vessels at sea in 1904 shows a weekly menu of:

	Breakfast	Lunch	Afternoon tea	Supper
Monday	Coffee, ship's biscuit	Brown beans, porc	Tea, ship's biscuit	Fried fish, rice
Tuesday	Coffee, ship's biscuit	Peasoup, porc	Tea, ship's biscuit	Fried fish, rice
Wednesday	Coffee, ship's biscuit	Brown bean soup, porc	Tea, ship's biscuit	Fried fish, rice
Thursday	Coffee, ship's biscuit	Brown bean soup, rice	Tea, ship's biscuit	Fried fish, rice
Friday	Coffee, ship's biscuit	Peasoup, porc	Tea, ship's biscuit	Fried fish, rice
Saturday	Coffee, ship's biscuit	Brown bean soup, porc	Tea, ship's biscuit	Fried fish, rice
Sunday	Coffee, ship's biscuit	Potatoes, porc	Tea, ship's biscuit	Fried fish, rice

⁵¹⁰

In 1806, there is record that Martinus den Breems was skipper on Jonge Abram fishing *beugvisserij* in the North Sea in spite of the war. His oldest son Maarten and his nephew Hendrik were onboard as boys; they were only eleven and nine years old, gaining 2,5 *guilder* per *last*. The skipper gained 5,5 *guilder* per *last*, the cook 5, the able seamen 5 each and the seamen 3 or 4 *guilder* per *last*.⁵¹¹ The young boy Maarten den Breems must have accepted biting the bait, as we know he passed his apprentice and became a skipper himself fishing on vessels in the same *rederij*: the Dorsmans. Only in 1889 did the Dutch politicians pass a law on children's work, work hours and working conditions. It did not permit work by children younger than twelve nor any dangerous work for children younger than sixteen in places producing, processing, transforming, re-creating, decorating, completing or in other ways making material available for use. The children must not work more than eleven hours a day and they must have one hour's break. Sunday must be a day off, and in case of accident, the employer must report to an inspector at the local community within twentyfour hours. Exception to the law was the fishing business.⁵¹² Still, the fishers were not the first to complain or organize. Some historians believe the church played a crucial role in settling the children's and maybe the fishers's engagements, but it

⁵⁰⁹ Kranenburg; *De Zeevisscherij van Holland*; chap.4,p.107-8 and Kolff Nans; *Zeevisserij Maassluis*; Rijksuniversiteit Leiden, 1978 p.12 and Baalbergen; *Zilver in de netten*; p.28-30

⁵¹⁰ Brongers B., Buning E.J., Meulen L.C. van der, Thijssen F.F., Hofstede J.W.; *Rapport der Commissie tot onderzoek naar het leven van schepelingen aan boord*; Nederlands tijdschrift voor Geneeskunde, 1904 nr.2,vol.40.p.1375-1388 the report only reported problems in fishing business caused by lack of catch and thereby lack of food

⁵¹¹ Vellekoop Ingena; *Martinus den Breems*; p.43-44 – I am unsure about these declarations, while cod fishing is known to be paid individually according to performance...

⁵¹² Law of 05.05.1889 no.48

might also be due to practical measures taken by the ship owners and fishers in mutual understanding.

Practical measures

Workers' living conditions in the Netherlands were similar to elsewhere in Europe at the time, but the fishers's living conditions differed because their income depended on a fluctuating resource. Though they went to sea fishing, they were not sure to return with any fish.

*"Maar, veel te laat thuis, stinken naar de haring, geen waardering voor het zakdoekje gevuld met lekkere haring, maar een pak slaag;...Dreigementen, straffen en honger hoorden nu eenmaal bij het genot van het avontuur, bij zoveel belevenissen even onafscheidelijk als de knoop bij het knoopsgat."*⁵¹³

Therefore, the fishers fishing at sea did not murmur loudly about the hammocks. The nutrition in Dutch workers' food depended on the geographical location. When in the cities, the workers had difficulties keeping up the self-sufficiency common in the rural areas and the smaller towns. Here in contrary, the fishers's wives often grew vegetables as a means of income as well as a way of keeping self-sufficient bearing in mind the regular supply of *vrouwenvis*. In the coastal towns, the fishers's wives were known for their asparagus, and their herbs so the fishers's food onboard was probably pretty representative to their local community and not bad at all on a national scale.⁵¹⁴ Unfortunately, not all fishers were able to sign on a vessel all year round. In 1804, the municipal council in Vlaardingen set up a soupkitchen serving warm soup of mainly potatoes, peas, celery, cabbage and pork to the poor from December to March. The soupkitchen continued serving soup for many winters following the French occupation indicating part of the population had more difficulties overcoming the war and occupation than others.⁵¹⁵ The fact that only some of the herring vessels went for cod during winter left fishers with no work and no income.

*"De arbeider verdient te weinig om te leven, te veel om te sterven."*⁵¹⁶

The ship owners and the citizens in the fishing towns did care. If a vessel went down, a special collection was made in favour of the relatives. Loss of vessels fishing for cod were recorded in 1829, 1835 and 1836. In January 1839, the three vessels never returning to Vlaardingen from their winter beugvisserij left twentythree widows and fiftyfour orphans.

⁵¹³ Ligthart A.G.; *De Vlaardingers en hun Haringvisserij*; p.17

⁵¹⁴ Brugmans I.J.; *De arbeidende klasse*; chap.3

⁵¹⁵ Soeteman A.; *150 Jaar Sociale Zorg in Vlaardingen*; p.17,45-49 and Ligthart A.G.; *De Vlaardingers en hun Haringvisserij*; p.40-41 and Meere de; *Economische ontwikkeling en levensstandaard in Nederland*; part II,2 Meere's calculations do not correspond with Soeteman on the temporary unemployment, and poor situation in (fishing)towns in the coastal provinces. This is probably due to the sources Meere work with, and the cooperation between church and authorities on the poor aid at the time, ship owners often engaged in the local municipality...

⁵¹⁶ Brugmans I.J.; *De arbeidende klasse*; p.137

This time the people in Vlaardingen did not just make a local collection, they asked king Willem I for help. The royal family initiated a national lottery in favour of the bereaved and together they collected twenty five thousand five hundred *guilder* that provided the basis for the *Zeemansfonds*. The interest of the fund then provided the support, and subsequently fishers and ship owners paid two percent of their earnings to the *Zeemansfonds* as an insurance against invalidity, death or as a pension. By 1853, two hundred eleven fishers had contributed, but by 1871 the *Zeemansfond* closed for new members. When in 1877 two vessels wrecked, Pieter Kikkert, who lost one vessel, started a collection in order to establish a new fund. He managed to collect thirteenthousand *guilder* and establish the *Vereeniging tot oprichting en instandhouding van het Visschers weduwen- en weezenfonds*. Like the *Zeemansfonds*, the *Visschers weduwen- en weezenfonds* supported the bereaved as well as securing future fishers's life if unemployed, injured or retired, by receiving one percent of their wages; the ship owners paying two percent of the revenue per fishingtrip.⁵¹⁷ In 1851 and in 1854, a new poor law assigned all responsibility to the church. The liberal rejection of municipal social aid introduced a distinction between valid and invalid poor, encouraging private initiatives like Pieter Kikkert's and other wealthy persons, some of whom lacked lawful successors, to leave a fund for poor seamen and fishers. Two such persons in Vlaardingen were Ida Maria de Raath and Arie van West.⁵¹⁸ Funds were also established in the other fishing towns. A revision of the poor law in 1870 removed the geographical requirement of birthplace for obtaining aid. This made life easier for the fishers who moved to where the work was. But it also caused a change in attitude while the people seeking help no longer necessarily had a connection to the people helping them and vice versa.

*“De armenzorg werd niet gezien als een humanitaire plicht, maar als een morele plicht. De leidende gedachte van het nieuwe principe was niet humaniteit doch politiezorg.”*⁵¹⁹

Change in working conditions

Innovation came with the introduction of the *logger* vessel. The shipowners soon benefitted from the quick vessels with the bigger hold and earned more money from the bigger catch. What is little recognized is its limitation to herring fishing.

⁵¹⁷ Soeteman A.; *150 Jaar Sociale Zorg in Vlaardingen*; p.186-190 Pieter Kikkert's fond was closed in 1940 In Noordwijk aan Zee a certain amount of money called *godsgeld* was withheld from the price paid for the fish and given to the church, the orphanage and the poor relief see Baalbergen; *Zilver in de netten*; p.31

⁵¹⁸ Soeteman A.; *150 Jaar Sociale Zorg in Vlaardingen*; p.151-183 (some confusion on the validity of the sources as Ida Maria de Raath is the name of a vessel in Buisman; *De Vlaardingse Koopvaardij*; p.31,41-45)

⁵¹⁹ Soeteman A.; *150 Jaar Sociale Zorg in Vlaardingen*; p.65

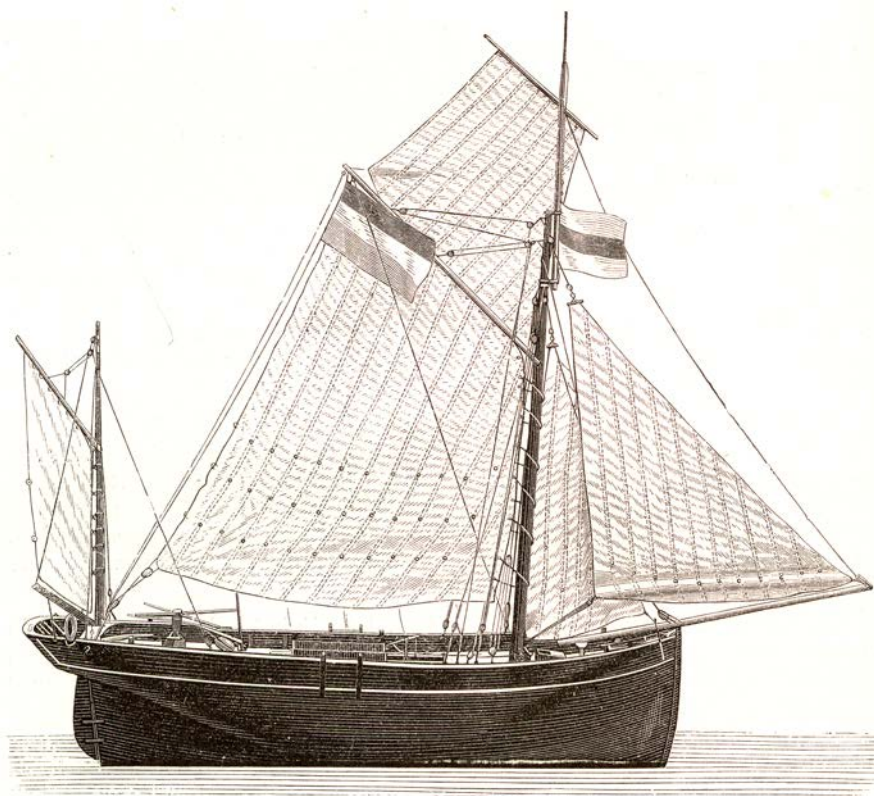


Fig. 65. Niederländischer Kutter-Logger für den Häringsfang (Modell).
Aussteller: A. E. Maas, Scheveningen.

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The origin of the success was its use of gear and change of fishing banks for herring more so than the type of vessel. The *logger*

*“Maak per seizoen 4 of 5 korte reizen naar visgronden die dicht bij huis liggen. Neem genoeg met de daar te vangen kleine haringsoort en breng, zo nodig, een deel van de vangst als steurharing ipv. als gekaakte haring thuis. De mindere stukprijs voor de haring weegt ruimschoots op tegen de veel groter aanbreng per seizoen.”*⁵²¹

The skippers and fishers employed felt inadequate though. The bulwark of the *logger* was lower than the bulwark of the *hoeker*. This was part of the reason the *logger* was not as heavy and slow at sea, but it meant that more water went onto the deck where the fishers

⁵²⁰ 5193 (inv.nr. book) p.126 Collectie Museum Vlaardingen, Picture from the following book from the museumcollection: Amtliche berichte über die internationale Fischerei-Ausstellung zu Berlin 1880. Mit 323 in den text gedruckten holzschnitten. Berlin Verlag von Paul Pary 1881; It was printed on page 126 of the book, “It depicts a model from a logger that Adrien Eugene Maas from Scheveningen introduced in The Netherlands (Scheveningen) in 1870 and which was a huge success. Thanks to Maas the *hoekers* disappeared.”

⁵²¹ Ploeg J.; *Sloepen en loggers, Nieuwe scheepstypen voor de aloude Noordzeevisserij 1800-1875*; p.89, 1990 this is Ploegs paraphrasing of an article in *Visscherij Courant Maassluis* July 24th 1870 and Ploeg presents himself as a *scheepsbouwkundig en modelbouwer* that is a shipbuilding expert and model constructor and the information in his report on *sloepen* and *loggers* should be considered as such

worked, curing the herring. The new working conditions on the *loggers* were poorer, and skippers and fishers soon created a poem:

*“Hoekers en buizen
Zeemanshuizen
Loggers en smakken
Waterbakken.”*⁵²²

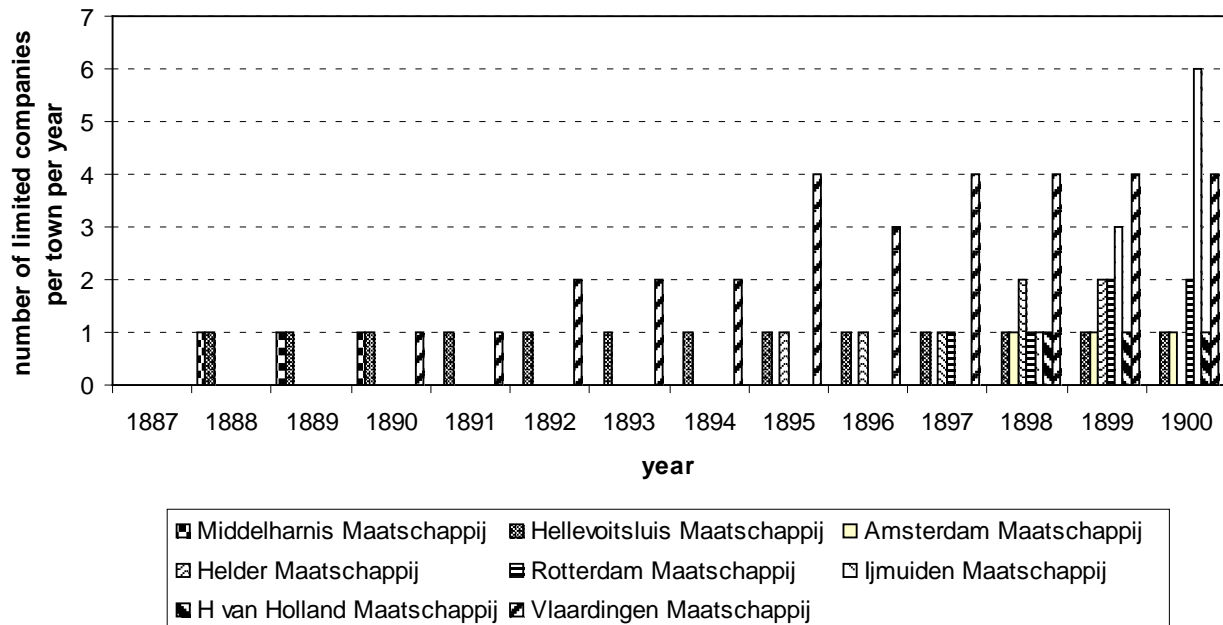
Still, the fishers must salt the fish in barrels. Some skippers fishing for herring in *loggers* started fishing in different places and at different times where the weather was less harsh. They accepted no longer landing only *volle haring*, the best and biggest herring, but also *maatjes haring*, a smaller, not so well-cured and less delicate, but cheaper herring.⁵²³ Correspondingly, ship owners accepted a new market for the herring, as they only exported *volle haring*. *Maatjes haring* opened an expanding home market because of its low price: the poor people. This was a remarkable change, which had come about because ship owners, skippers and fishers from Scheveningen established in Maassluis following the liberal ideal of individual freedom. Here they practised sea fishery applying their usual coastal fishing methods. They started earning good money; more than traditional sea fishers did hitherto, but they paid a price working under worse conditions leading to frustration, dismissals and social unrest.⁵²⁴ Shipbuilding yards in Vlaardingen built *loggers* in the 1860's; they just did not sell the *loggers* to the local shipowners because of the limitation to herring fishery. In 1870, the shipbuilding yards in Vlaardingen built and sold *loggers* to local shipowners in charge of limited companies. It was a combination of certain residential shipowners and external investors engaging in the new profitable herring fishery, seeking shipowners as directors of their investments.

⁵²² Breems M. den ed.; *Uit Vlaarding's Bloeitijdperk, De haringvisserij in 1870-1899*; p.5-7, Vlaardingen 1950

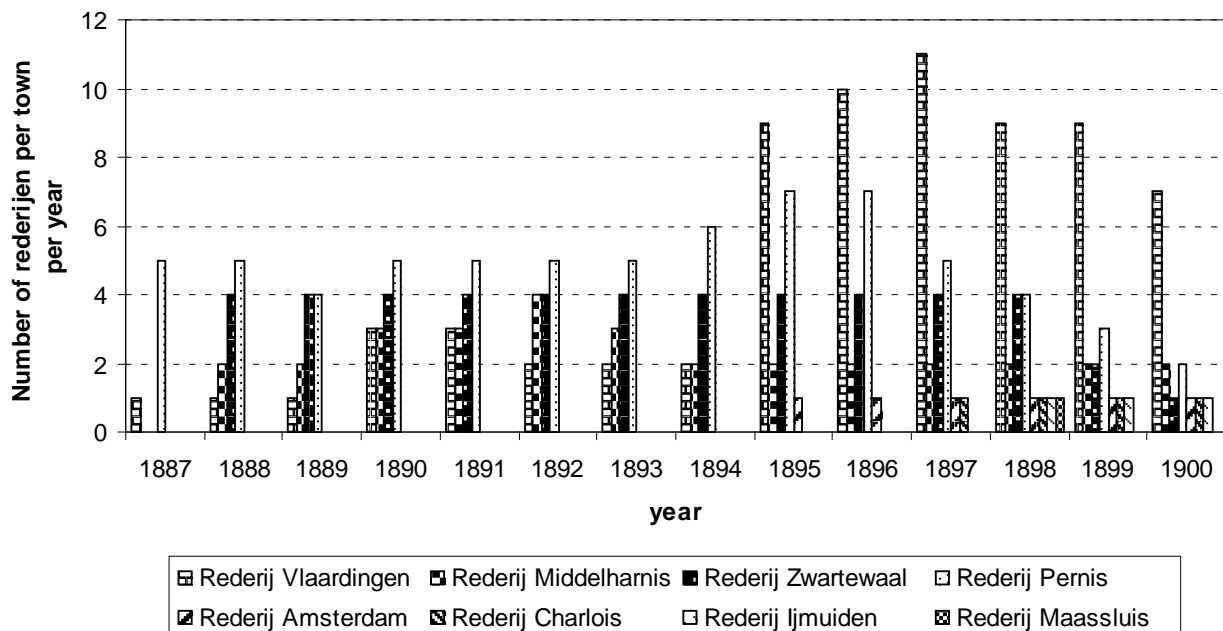
⁵²³ See Appendix 7 note 147 and 523

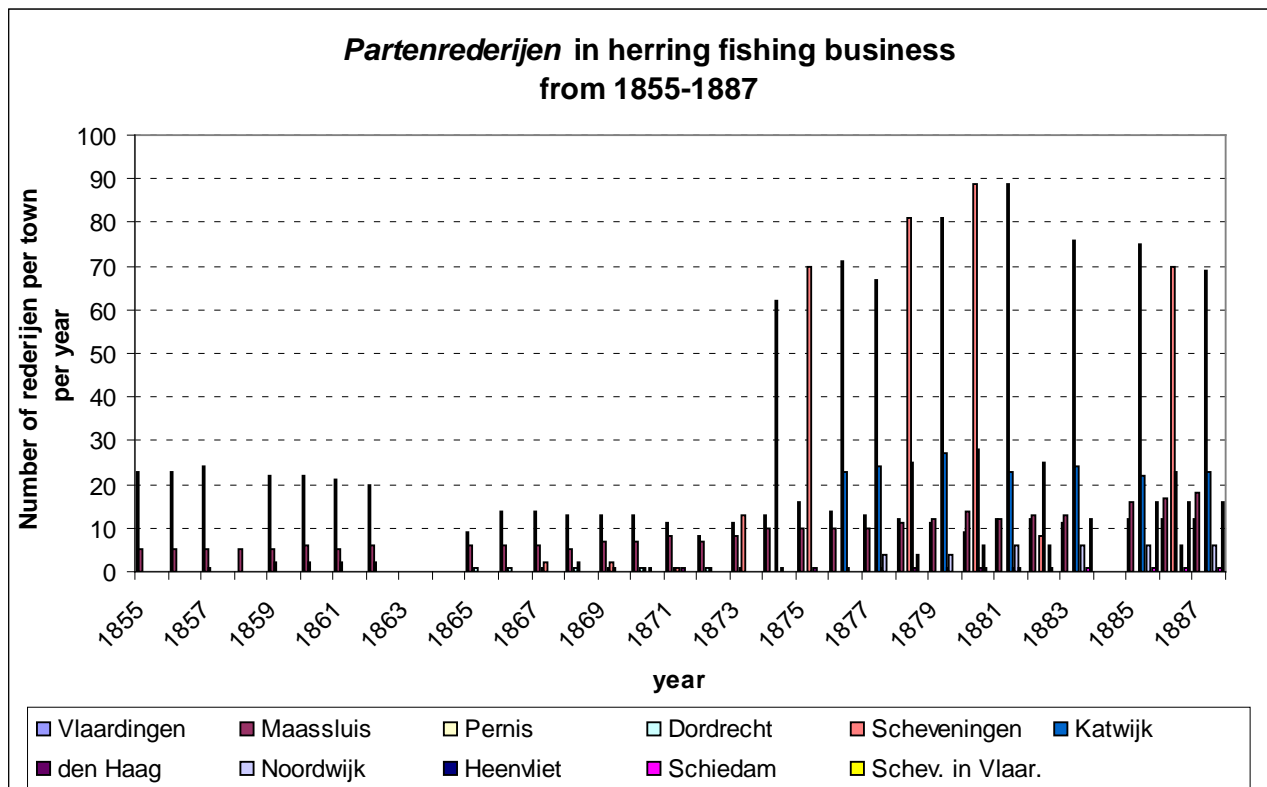
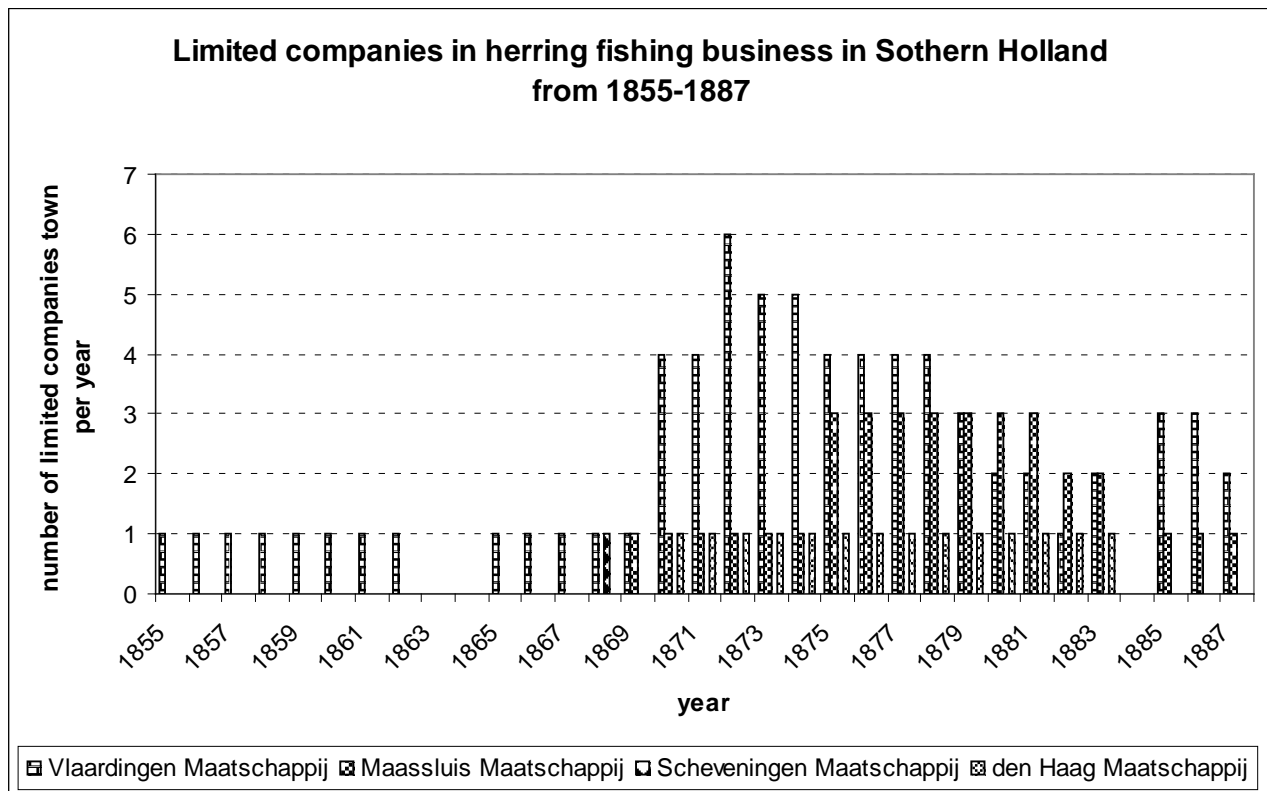
⁵²⁴ Ploeg J.; *Sloepen en loggers*; p.5-6

Limited companies in cod fishing business in Southern Holland 1887-1900



Partenrederijen in cod fishing business in Southern Holland from 1887-1900





⁵²⁵ The expanding herring fleet in the 1880s and 1890s needed more fishers, more gear,

⁵²⁵ Ploeg J.; *Sloepen en loggers*; p.229-240 and Stadsarchief Vlaardingen; *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar...* on the ship owners of vessels fishing for cod and

more barrels, and more workers on the wharf, and the cod fishers depended on their work as usual. Many of these fishers were no longer local; they came from other Dutch towns or from Germany. The limited companies did not cooperate within a network of local owners in the same way, as did the *partenrederijen*. The norms in fishing originating from the generational exchange of expertise vanished, and trust and reciprocity weakened. At first, it was less evident because trawling took over, lifting the seasonal bans on fishing along the coast and deleting the need for expertise matching seasonal fishing. However, it became clear in the long view when competition from the coastal fishing towns became unavoidable. Shipowners had set aside their knowledge about fishing in favour of new entrepreneurial ideas that looked profitable.⁵²⁶ Some shipowners in Vlaardingen built *sloepen* vessels, when others converted to *logger* though. One reason was they:

*“Vang haring van de beste soort, besteed veel aandacht aan de verwerking en breng een niet te overtreffen produkt op de markt, dan krijg je de hoogste prijs voor je vis. Ze kunnen het voor alsnog niet over hun hart verkrijgen om de taktiek van de heer Maas te vervolgen. Zelfs de twee sloepen-reders durven het niet aan om hun nieuwe schepen, die toch bijna gelijkvormig zijn aan de loggers, op de nieuwe manier te laten vissen.”*⁵²⁷

Another reason was they sent off their *sloepen* vessels for herring as well as for cod emphasizing the seasonal fishery. Two of the *sloepen-reders* were Arij Hoogendijk and Maarten den Breems who engaged in the renewal of vessels at the time and participated at international exhibitions presenting their *sloepen* alongside Maas' *logger* vessels.

their limited companies forming a counterpart to Gerrit Pons' collection of ship owners of herring vessels in Pons; *De Bakens verzet*; chap.12

⁵²⁶ Breems M. den ed.; *Uit Vlaarding's Bloeitijdperk*; p.8-16,20-21,34 and Voort J.P.van de; *De Rederijen en Handelsmaatschappijen Hoogendijk*; chap.III,2

⁵²⁶ Breems M. den ed.; *Uit Vlaarding's Bloeitijdperk*; p.13,22-32,40-41 and Penrose Edith; *The Theory of the Growth of the Firm*; chap.5-7

⁵²⁷ Ploeg J.; *Sloepen en loggers*; p.89



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In cod fishing, the catch declined and the price rose. The *logger* did not have a *bun* basin like the *hoeker* or the *sloep* to keep fresh fish alive, excluding it from participating in most *beugvisserij* as the demand for fresh cod surpassed the salted cod. If any of the *logger* vessels fished for cod, they salted the cod; occasionally, they used a *schrobnet* along the coast and ice to keep the cod fresh, acquiring the reputation of *stinkreizen*.⁵²⁹ Shipowners from Vlaardingen and Maassluis maintaining *beugvisserij* during the second half of the 1800s used *logger*-inspired *sloepen* vessels, practising seasonal fishing business with approved working conditions. Their *sloepen* vessels were slightly different to the *chaloupes* used by the fishers from Middelharnis, Pernis or Zwartewaal, fishing for cod from the beginning of the 1800s.⁵³⁰ It is interesting, how the shipowners from Vlaardingen and Maassluis had a similar objection to the *chaloupe* and the cod fishery in Middelharnis, Pernis and Zwaartewaal in 1818-1819 as did their colleagues towards the *logger* and the Scheveningen-style fishing in 1866-67. Around 1900, when steam vessels became an option, the reaction from many shipowners, skippers and fishers in Vlaardingen and Maassluis was similar to that towards the *logger* vessels:

“De personeelsbezitting der floot stond in den aanvang in sterke mate onder invloed van het oude materiaal. De ervaren schippers der oude kustvisserij waren in het begin te trotsch om zich op een zoodanige stoom-trawlervloot te laten monsteren, zoodat vrijwel alleen lieden met een reputatie... als dekpersoneel... De kundige visschers, de lieden met

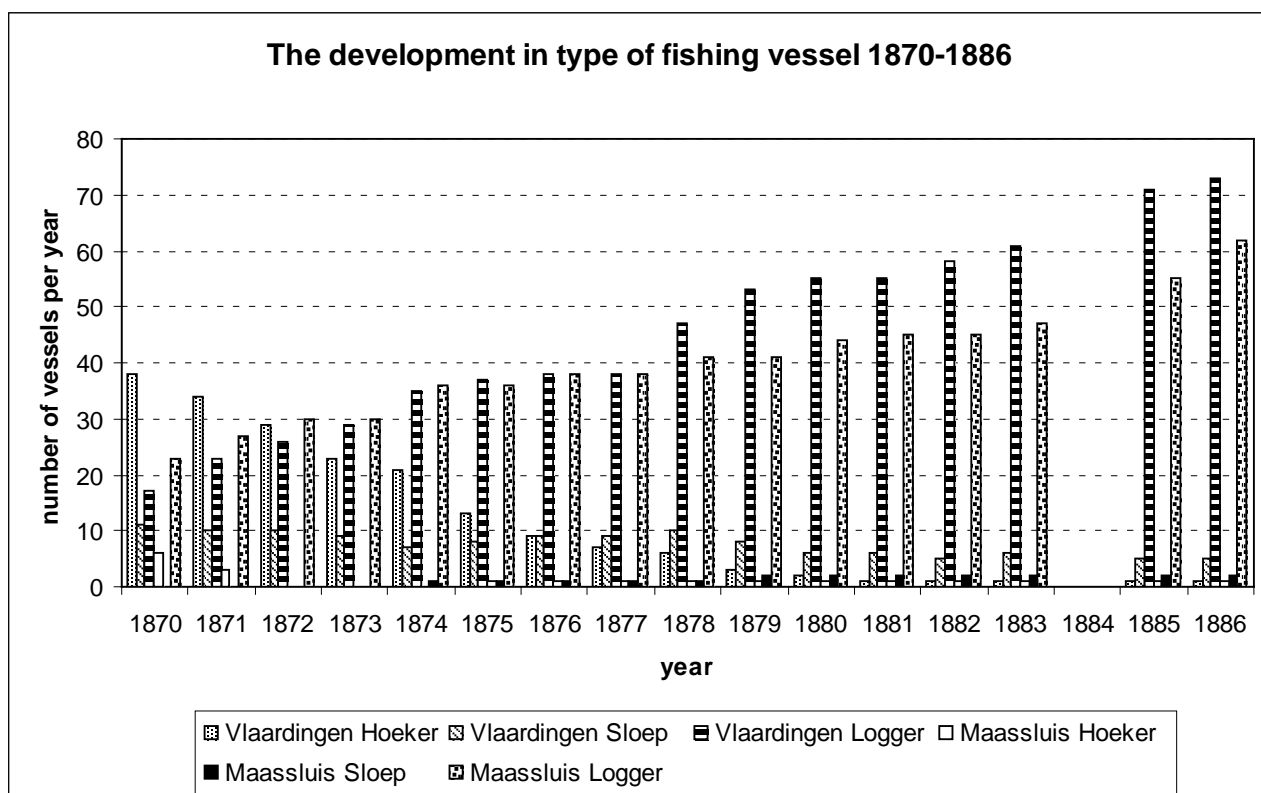
⁵²⁸ P0129 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen): Arij Jzn Hoogendijk (Vlaardingen 15-8-1800 – Vlaardingen 14-7-1878) Gehuwd met Maria Johanna Le Fèvre de Montigny (6-5-1810-?)

⁵²⁹ Hoogendijk A. Jz.; *De Grootvisserij op de Noordzee*; p.194-202

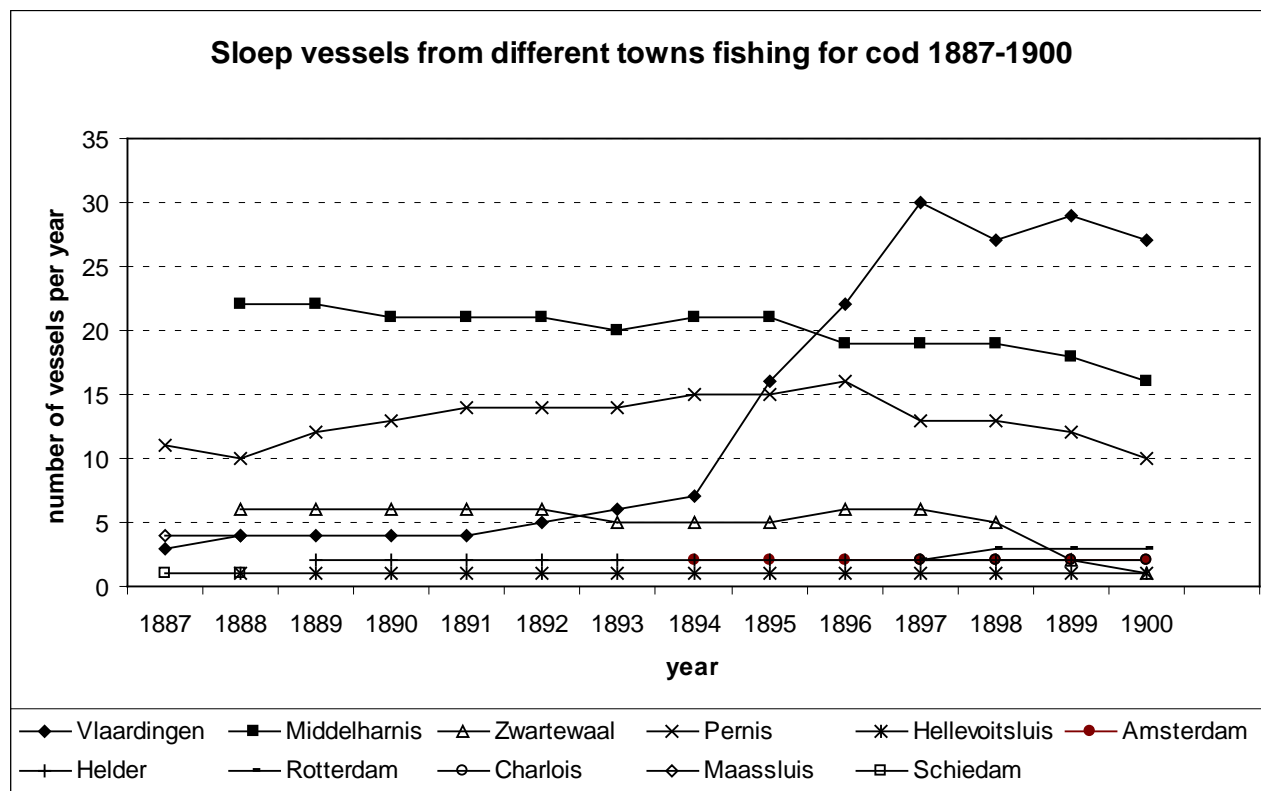
⁵³⁰ *Chaloupe* is the French word for *sloep*, see **Regulating and supporting Dutch cod fishing financially** and Haalmeijer Hans, Vuik Dik; *Buizen, Bommen, Bonzen en Bidders*; p.128-133 and Ploeg J.; *Sloepen en loggers*; p.12-13,45,49,53-55,91,129,154,168,296,303

inzicht inzake de behandeling van schip en netten, kwamen eerst, toen de stoomtrawlerflood hun een zoodanige concurrentie begon aan te doen, dat zij zich genoodzaakt zagen om zich aan bord van de stoomtrawlers te laten anmonsteren... Bezochten de kleine stoomtrawlers in den aanvang de nabije vischgronden, waar de visschers met de boomkor voorheen hun bedrijf uitoefenden, omdat de trawlerschippers, uit de bemanningen der zeilschepen gerecruteerd, deze gebieden kenden, later, toen de beugers wegens den snellen achteruitgang van hun visscherij op de trawlers kwamen, werden met de grootere vaartuigen de hun goed bekende gebieden bezocht, in casu de middelverre vischgronden.”⁵³¹

If the decline in *beugvisserij* was due to its traditional fishing methods or to the impact of new technology on the fish stock has been the big issues for many years.



⁵³¹ Schouten Anton; De Nederlandsche groote trawlvisscherij; p.106



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Dutch cod fishers heading for the 1900s

Knowing what is what is...

“De mensen die in het midden van de 19e eeuw de grootste stoot gegeven hebben tot de opbloei van de aloude pekel-haringvaart komen niet uit de kringen van de haringreders van de Maassteden.”⁵³³

They did not do so, because they knew from experience gained through generations within their families that they must fish on certain fishing banks at certain times of the year and use fishing gear catching the mature fish, leaving the juveniles to reproduce and maintain the fish stock for future generations of shipowners and fishers. They did not believe the *logger* vessel and its *pekkel-haringvaart* capable of doing so, on the contrary. The shipowners' family in Vlaardingen, the Hoogendijk did not buy a *logger* vessel until 1891 when they established their first limited company. They did well by combining fishing business with adjacent trades and merchant shipping like other ship owners in the

⁵³² Hoek G.; *Economische geschiedenis van het Rijnmondgebied*; p.18-19 and Stadsarchief Vlaardingen, *Naamlijst der Boekhouders, Schepen en Stuurlieden van de Haringschepen in 't Jaar..* on the dispersion of and development in type of fishing vessel in the latter half of the 1800s

⁵³³ Ploeg J.; *Sloepen en loggers*; p.304

1800s.⁵³⁴ As mentioned, Arij Hoogendijk supported the *sloep* vessel contrary to the *logger*, buying *sloepen* at the shipbuilding yard when most other shipowners bought *loggers*. Maarten den Breems and the shipowners from Pernis, Middelharnis and Zwartewaal (and Rotterdam, Amsterdam and Brielle) bought *sloepen* after 1870, while the shipowners in Vlaardingen De Zeeuw, Ijzerman, Ommering and Wingerden continued using their *sloepen* for cod fishing after the introduction of the *logger* vessel.⁵³⁵ The De Zeeuw family built the first *logger* vessel in their shipyard in 1870 for the limited company Volharding, and simultaneously they built a *sloep* for Maarten den Breems. In spring 1873, Hendrik Drop De Zeeuw and his son Pieter de Zeeuw, who continued business, entered into partnership with the ship owner Johannes Jacobus van Raalt from Vlaardingen.⁵³⁶



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The business became De Zeeuw & van Raalt and held several fishing vessels including a *sloep* fishing for cod as well as running a warehouse including one for *jagerij*, a *kuiperij* and a shipyard.⁵³⁸ The De Zeeuw family resigned from the partnership when Hendrik Drop de Zeeuw died in 1885. In 1886, Hendriks son Pieter de Zeeuw built himself a *logger* and again in 1892 another *logger*. Johannes Jacobus van Raalt also continued his own

⁵³⁴ Voort J.P.van de; De Rederijen en Handelsmaatschappijen Hoogendijk; p.14-20 Only in 1916, at their first limited company's 25th anniversary, did the Hoogendijk family report three *stoomloggers* The Hoogendijk family still runs an active business today and Buisman H.; De Vlaardingse Koopvaardij;

⁵³⁵ Struijs Matthijs A.; Om een bevaeren schip te maecken; p.289-345

⁵³⁶ Johannes Jacobus van Raalt 02.04.1849-07.02.1931 ~ Jansje de Bink 12.08.1851-.. Stadsarchief Vlaardingen, ISIS and Struijs Matthijs A.; Om een bevaeren schip te maecken; p.294-299

⁵³⁷ P0769 Collection Stadsarchief Vlaardingen (Cityarchive Vlaardingen); Pieter de Zeeuw (Hzn.) (Vlaardingen 1-8-1847 – Vlaardingen 6-4-1895) Scheepsbouwmeester en reder, Gehuwd met Adriana Jacoba Koolhaalder (29-2-1848 – 17-1-1927)

⁵³⁸ Verloop Erika; Opkomst en ondergang van een Vlaardingse rederij en haringhandel; NETwerk, Jaarboek Visserijmuseum, nr.3, p.7-25, 1993 and *kuiperij* meaning the workshop where the craftman makes barrels see Bly Frans; Verklarende Vakwoordenlijst; Leuven 1931

business. In 1899, he bought land and a warehouse from Paulus and Huibrecht Kikkert, the sons of Pieter Kikkert (junior) and in 1910; he bought a vessel from the Kikkerts and several wooden vessels from different ship owners at the time. Johannes Jacobus van Raalt left a flourishing business for his son in 1931. Unfortunately, things changed and by 1949, the son had sold the vessels and the warehouse and liquidated the business. Johannes Jacobus van Raalt learnt about fishing business because he got an apprentice at Martinus den Breems' office instead of becoming a baker like his father. Due to work, he then acquired shares in fishing vessels, which initiated the engagement with De Zeeuw. Like Pieter Kikkert (senior), Johannes Jacobus van Raalt entered the Dutch cod fishing business without the mentoring education growing up in a ship owner's family. They both acquired skills of managing fishing business being bookkeepers, and as such, they did well. It is remarkable how open the established ship owners were towards new colleagues. Maybe they were aware that being established did not happen overnight, and sharing knowledge only came back twofold, because what van Raalt, Kikkert and others lacked was the insiders' knowhow and social network within the family businesses, but what they possessed was entrepreneurial engagement, inspiration and willingness to work. The shipbuilder Joost Pot also possessed such engagement. In 1871, he settled in Vlaardingen at the age of sixty to start a shipbuilding yard of his own, engaging his sons in the business. He built his own *logger* vessels for his own herring fishery, setting up a sailmaker's workshop and a workshop repairing and improving nets. In a very short time, he established a shipowner's business including his own shipbuilding yard, while *he* was convinced the new vessels applying the new herring fishing methods was the way forward for him and his sons.⁵³⁹ In 1893, Joost Pot had thirty *logger* vessels fishing for cod and herring. It was the biggest fishing fleet in Vlaardingen. Pot, Raalt and Kikkert were examples of committed men, who came into fishing business during the 1800s. They established limited companies and made a lot of money from the introduction of the new vessel, new gear and fishing methods, but they were also among the ones who unaware started the Dutch part of the exploitation of the cod stock in the North Sea ignoring the importance of seasonal fishing and the difference between *beugvisserij* and *schobnet* fishery.

Point of departure

The rivalry between the different fishing towns that was so evident during the first half of the 1800s due to the legal differentiation continued during the second half of the century, but in a more indirect manner. In 1871, the *Nieuwe Waterweg* canal opened creating a

⁵³⁹ Struijs Matthijs A.; *Om een bevaeren schip te maecken*; p.129-142 and Ploeg J.; *Sloepen en loggers*; p.252,327

short cut for the vessels up the river Maas to the Sea. The lifting of the mandatory branding of barrels of herring in 1868, and an equivalent abolition of controlling fishing vessels in 1879, encouraged herring fishing and the expansion of the port in Vlaardingen in the 1880s, and delayed the repeatable considerations of a construction of a port in Scheveningen.⁵⁴⁰ Several ship owners from Scheveningen and other coastal towns signed in vessels with a keel in Vlaardingen because of the delay and the good times in herring fishing. Meanwhile, they maintained *bom* vessels fishing along the coast, constituting just about half of the Dutch fishing fleet during the second half of the 1800s.⁵⁴¹ In 1876, the counterpart to the *Nieuwe Waterweg*: the *Noordzeekanaal* and the port at the mouth of the canal: IJmuiden opened. This initiative further delayed a realization of a port in Scheveningen, attracting fishers from the smaller coastal towns. Many fishers in Scheveningen remained loyal to their home town and to their family business, but a terrible storm in 1894 destroyed their vessels on the beach and marked a turning point. Not only did the ship owners and fishers in Scheveningen subsequently receive national support; the debate on the port resumed so that in 1898 the government granted two million *guilder* for the project, and in 1904 the port at Scheveningen became reality. Following the storm in 1894, IJmuiden abolished its local tax *havengeld* for non-local vessels landing fish. Vlaardingen soon lost most of its “visitors” and some of its heirs to IJmuiden, and more vessels followed suit to Scheveningen in 1904. Whether fishing at sea or near the coast, the coastal ports now became the preferable homeports to the Dutch fishing fleet.⁵⁴² They facilitated the introduction of steamdriven vessels into Dutch fishing and it transformed Dutch fishing, cod fishing not least, compared to 1800.

No return?

It is well known that German fishers came to work on the expanding herring fishing fleet in the Netherlands during the 1890s, but it seems less recognized that a noticable amount of Dutch fishers returned along with their German colleagues in particular in 1904 to sign on German vessels in Germany. Artisans accompanied them from professions related to fishing outdone by the rising industry. In Germany, the government supported fishing, and the working conditions and the pay were better. The German accepted the Dutch, but they also teased them by saying:

⁵⁴⁰ Vermaas J.C.; *Geschiedenis van Scheveningen*; part 24 and Beaujon A.; *Overzicht der Geschiedenis*; p.296, Besluit 05.01.1868 and Staatsblad 7.5.1878 no.37 “*Ten gevolge van deze wet zal de officieele stempel voor de gevulde haringfusten den 1sten Juni 1879 ophoudende bestaan an alleen de gelegenheid open blijven om bij aankomst van den haring uit zee dezen Rijksambttenaren te doen keuren.*”

⁵⁴¹ See **Dutch cod fishing in the 1800s** part on **The fishers’s means of dealing with a declining cod stock**

⁵⁴² Constructing a port on a sandy waddensea beach was a big engineering project by the end of the 1800s, showing similar, competitive examples in neighbouring countries like Germany and Denmark see Bruhn Verner; *En by bliver til, Esbjergs Historie 1850-1910*; bd.2, Esbjerg 1994

*“Holland in Not,
Dütsland hett Brot”⁵⁴³*

The Dutch fishers and artisans claimed they came because they were more skilled than the German, but it is likely they tried to hide their wounds from seeing their traditional profession disappear. It was not just a way of working it was a way of life disappearing. The solidarity and sense of togetherness and brotherly satisfaction among the fishers arising from overcoming the fear of not catching any fish, of not returning at all, and from mutually creating a life's work. The fishers felt as if their skills were replaced by new working methods of lesser quality and a self-centered work ethic unfamiliar to them.

“Ongetwijfeld als gevolg van het avontuurlijke, van het wisselvallige, maar vooral van het feit, dat de jongens alle werkzaamheden, behalve het vissen zelf, zagen vervaardigen. Als wellicht in geen ander bedrijf werd hier dagelijks en binnen de beperkte ruimte van een betrekkelijk kleine gemeenschap het schone, het steeds boeiende van het ‘scheppende ambacht’ voor ogen gesteld; niet enige onderdelen, maar alles, compleet; vanaf grondstof tot gebruiksvoorwerp... Nu zijn alle fabrieken waar het fust aan de lopende band wordt vervaardigd, alle scheepswerven waar nog loggers worden gebouwd, omringd door hoge muren, of ver verwijderd van de woonplaats. Het maken van het fust, het bouwen van een schip zo ingewikkeld technisch, zo machinaal, het gerei zo machtig, zo gecompliceerd, dat de jongens van vandaag misschien nog wel iets ervan kunnen zien, maar het niet meer kunnen bewonderen, omdat zij nog niets of weinig ervan begrijpen. De hedendaagse voortbrengselen zijn ongetwijfeld wonderen van techniek, gewrocht door eveneens hoogst bekwame vaklieden, en van geleerden. Maar het boeiende, het aantrekkelijke van het ambacht, van het zien scheppen, is gaandeweg verdwenen.”⁵⁴⁴

Some ship owners were aware of the difficulties applying new technology to fishing unless the fishers agreed, recognizing the need for the skippers', mates' and fishers's knowledge and service for the business to grow. They usually employed the same skippers for longer periods and acted within a strong network. Meanwhile, some ship owners did not consider the involvement of their employees a particular value to their business. These were companies, where skippers signed on for shorter periods, moving from one company to another. The question is if there is an entrepreneurial spirit within the company. Penrose distinguishes between two kinds of entrepreneurs: the one who is a product-minded goodwill builder and the other who is an empire builder.⁵⁴⁵ The former pays attention to production and distribution of goods and services by improving quality and lowering costs. The latter cares about outdoing competitors and taking up a dominant position. It is clear

⁵⁴³ Ligthart A. G.; *De Vlaardingers en hun Haringvisserij*; p.104-108

⁵⁴⁴ Ligthart A.G.; *De Vlaardingers en hun Haringvisserij*; p.21,23

⁵⁴⁵ Penrose Edith; *The Theory of the Growth of the Firm*; chap.3

that the liberalisation of Dutch fishing initiated more of the latter entrepreneurial spirit than hitherto. Was it as well the reason to the rapid growth in fishing business and the consequential decline in the cod stock? The ship owners need not set aside managerial efforts to evoke entrepreneurial ideas for their fishing business to grow because they supplied cod fishing business with their sidelines. Unfortunately, not all fishers had this option and by the turn of the century many of them left. Is it fair to say that the liberal politics and institutional changes in the 1850s caused the ship owners of fishing vessels to redirect their business in ways that caused first a reduction of the fish stock and then a desertion of the fishers?

Modern theory and old (re)sources?

Ten years ago, there was a severe decline in the North Sea cod and its spawning stock biomass, SSB. ICES recommended a complete closure of the cod fisheries from 2003-2007 in order to restore the level in the fastest possible time, yet it was not complied with.



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Instead, the EU established a Cod Recovery Program, CRP in 2004, reducing cod quotas, days at sea and obligatory ports for landing cod aiming at a slower recovery of the SSB.⁵⁴⁷ Now, ten years later, the debate on the extinction of marine life, spans from multiple scientific articles to cartoons like this, and a play on the co-operation between scientists and fishers.⁵⁴⁸ A similar reaction to overfishing and economic crisis occurred in the Netherlands in 1900, as the play *Op Hoop van Zegen* came on.⁵⁴⁹ It illustrated the harsh conditions within the Dutch fishing community and onboard the Dutch fishing vessels causing so much debate that the government reconsidered its fishing politics.⁵⁵⁰ The experience that history repeats is no news; we may learn from experience. But when history reverses, how do we react? If we apply Elinor Ostrom's interpretation of game

⁵⁴⁶ Hagbard: "We cannot meet like this any longer. – My wife wonders why I never bring back any fish." by Chris Browne; Hagbard; no.1-21, Berlingske Tidende, 11.07.2008 see <https://www.hagardunor.net/hagardthehorrible.php>

⁵⁴⁷ Gray Tim, Hatchard Jenny, Daw Tim, Stead Selina; New cod war of words: Cod is God versus sod the cod – Two opposed discourses on the North Sea Cod Recovery Programme; Fisheries Research, vol.93, p.1-7, 2008

⁵⁴⁸ Sanderhoff Lærke; Klumpfisken; 2008, Faar 302, København V - the play is being made into a film in English see <https://www.dfi.dk/faktaofilm/film/en/82819.aspx?id=82819>

⁵⁴⁹ Heijermans Herman; Op hoop van Zegen, Spel-van-de-Zee in 4 Berijven; Amsterdam 1914 - the play was one in a row of socialist realist plays at the time drawing attention to working conditions and relationships between employer and employee, see Ligthart A.G.; De Vlaardingers en hun Haringvisserij; p.158

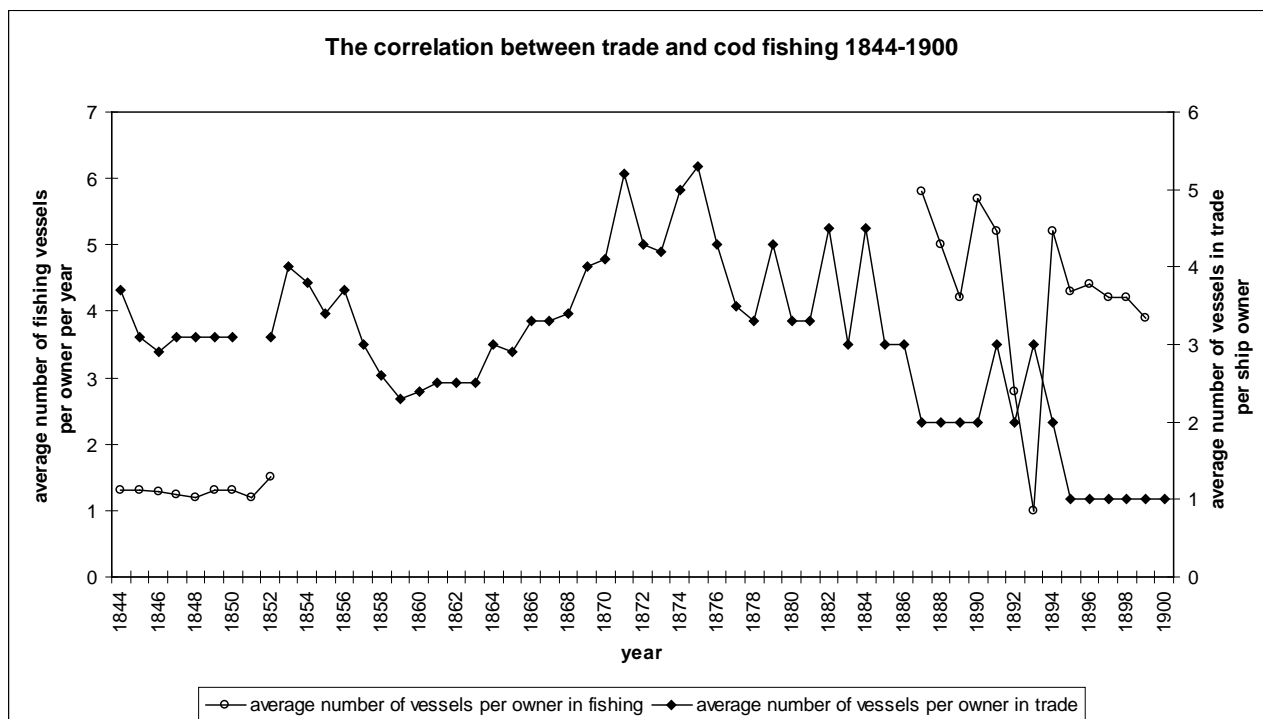
⁵⁵⁰ The new law on fishing came in 1908 and 1911 together with a revision of the Verslag, now the "Jaarverslag der Visserijinspectie 1911 betreffende den Dienst der Inspectie, de Werking van het toezicht en den Staat der verschillende takken van visscherij; vol.I Dienst der Inspectie en Werking van het Toezicht; Mededeelingen en Verslagen van de Visscherijinspectie; Uitgegeven voor rekening van het Departement van Landbouw, Nijverheid en Handel" literally separating fishing from fisheries science and fisheries management into different volumes

theory and common-pool resources to the history of Dutch cod fishing, do we receive an answer? Is there another answer?

Dutch cod fishing ahead?

A sustainable cod fishery

Trade was for generations a business activity alongside fishing. Mostly, vessels and crew were the same for trade as for fishing but of course, time and place were different. This applied to Dutch cod fishing at the beginning of the 1800s in that the ship owners having vessels fishing for herring sent their vessels off for either cod or trade during winter. The vessels went to Spain and Portugal or to the Mediterranean Sea or the Baltic Sea. In Spain and Portugal, they bought salt and cork for their fishing, and sometimes they bought wine and fruit, and sold salted fish, Dutch gin or potatoes, but often they went in ballast. When they went to the Baltic, they bought tar and pitch for fishing. Trade was important to both herring and cod fishing supplying fishing business with its necessities, yet it was also a means of flexibility enabling the ship owners to adjust to external circumstances like war and occupation. An example was the Crimean War from 1853-1856, when the Tsar closed the port of Sct. Petersburg to the English and the French, providing the Dutch with the opportunity of shipping goods to and from the Channal. Furthermore, a group of ship owners from Vlaardingen owned bigger sailing vessels like *schoenerbrikken* for trade in the Caribbean. The goods they imported did not provide for fishing, but the trade as such supplemented Dutch fishing so that when fishing went down trade went up and vice versa.



⁵⁵¹ What makes trade different to the other sidelines mentioned previously is its ability to maintain fishing business by occupying the fishers in trade, when there was no fishing, and the ship owners' deliberate wish for it to do so. The ship owners spread the risk and thereby the source of income allowing them to uphold a sustainable cod fishery. They were capable of doing so because the traditional family business recognized an accumulated knowledge and experience among employees and employers within the business as valuable assets in managing the business along with entrepreneurial ideas of expansion like foreign trade.⁵⁵² They knew how to make a good deal, and to earn sufficient with money to care for the well-being of their family, their employees and the upkeep of their hometown. This was part of business because it was worthwhile, and because in 1800, the Dutch society organized like a polycentric system meaning in provinces and towns where the citizens by democratic means engaged in, organized and decided on what to do, how and why.⁵⁵³ The *Kollegien* were examples with relevance to fishing, involving the ship owners, and several of whom being members of their city council as well, holding the position as mayor. Some even rose to the regional level in the province of Southern Holland, and the ship owners composed the laws on fishing, approved by king

⁵⁵¹ Buisman H.; *De Vlaardingse Koopvaardij in de tweede helft van de negentiende eeuw*; master thesis, Rijksuniversiteit Leiden, dec. 1982 and Nationaal Archief 3.11.05 inv.1-2, 1844-1852 matching the data on vessels for trade from Buisman's thesis and *Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringschepen* specifically on cod fising kept only from 1887 onwards

⁵⁵² Penrose Edith; *The theory of the growth of the firm*; 2009

⁵⁵³ Ostrom Elinor; *Understanding institutional diversity*; Princeton University Press, 2005, chap.9

Willem I, being effective from 1818-1857.⁵⁵⁴ The first half of the 1800s allowed the ship owners to work according to rules they agreed on themselves, and employ persons to monitor their fishing themselves. When the government liberalised fishing, closed the *Kollegien* and deleted all laws including the ones the ship owners had composed, it caused disillusion and degradation followed by a split and disregard of former rules among some, who seized an opportunity of individual profit. They manifested in two groups, one consisting of ship owners previously fishing at sea in *hoeker* vessels, now changing to *logger* vessels and profiting from the bigger catch of herring during the second half of the 1800s. In addition, a group of ship owners fishing along the coast in *bom* vessels began ignoring the seasonal ban on fishing, applying *schrobnet* whenever convenient. The remaining group of ship owners still thought their rules made sense and they voluntarily kept cooperating on their mutual agreements locally as hitherto.⁵⁵⁵ Unfortunately, the freedom in fishing did not maintain cod fishing, or a sustainable cod stock.

A common-pool resource dilemma?

The ship owners and fishers did not decide on the liberalization of cod fishing or the cutting of financial support in 1854 themselves. The basis for the Dutch government's decision was an admiration of the English liberal politics and a growing national debt in the Netherlands. There was little evidence of investigation into an exploitation of fish stocks in the North Sea, focus was on the country's technological advancement and industrialisation, and the politicians considered regulations a hindrance.⁵⁵⁶ The rules or laws on cod fishing, effective from 1818 and 1822, were based on the fishers's norms and traditions. The politicians no longer approved them, but had they readressed a common-pool resource dilemma? The Dutch complaints about the English trawling in the late 1700s came from the coastal fishers fishing for turbot, while complaints from the fishers fishing for cod at sea waited till the 1870s; then many quit cod fishing or changed their fishing gear from long line to *schrobnet*.⁵⁵⁷ In 1854, the ship owners claimed they needed the financial support to sustain, but they did not yet complain about troubles from a declining catch rate. The ship owners and fishers had preferences on how to fish, but they were not the only methods available. Because of the ship owners' multitargeted business structure, it is difficult to confirm if there was a CPR dilemma already in the first half of the 1800s.⁵⁵⁸ The laws on fishing show which norms and traditions the ship owners and fishers

⁵⁵⁴ See **The Institutional Analysis and Development Framework and the arguments** and Ostrom, Gardner, Walker; *Rules, Games & Common-Pool Resources*; chap.2

⁵⁵⁵ See **Dutch cod fishing during the 1800s** and **Dutch cod fishers in the 1800s**

⁵⁵⁶ Verslag over de zeevisscherijen; 1854, Besluit 09.02.1854 no.57

⁵⁵⁷ See **The origin of overfishing? Fishing in the North Sea prior to the French occupation**

⁵⁵⁸ Elinor Ostrom's criteria of a CPR dilemma in Ostrom, Gardner, Walker; *Rules, Games & Common-Pool Resources*; chap.1 p.16

transmitted, indicating as well if, how and why there was a CPR dilemma. Ostrom has a set of seven rules when working with CPR and game theory:

- position rules: defines positions and participants
- boundary rules: explains how participants enter positions
- authority rules: specifies the actions related to each position
- aggregation rules: defines the administration of or maintenance of the rules
- scope rules: specifies the use of the common-pool resource
- information rules: specifies that information must be available
- pay-off rules: specifies costs and benefits⁵⁵⁹

In the case of Dutch cod fishing, the position rules refer to Dutch ship owners entitled to fish for cod in the North Sea. The ship owners having vessels fishing for cod at sea confirmed their occupation with the minister in 1847, while their colleagues fishing for cod along the coast must do so to obtain financial support in 1822.⁵⁶⁰ The boundary rules refer to the means and ways of fishing, and here the Dutch cod fishers shared one law with the herring fishers: the oath that the skipper and two of his crew must swear when leaving midst the herring season and after coming back.⁵⁶¹ Then they had the formalized version of their habitual way of fishing put on the statute book by king Willem I when granting financial support.⁵⁶² The legislation also contained few authority rules on fishing for cod incorporated in the rules for herring; fines for not showing up or signing on with two skippers at a time. The work in the *Kollegien* and the election of their members were set in the regulations as was the selling of cod caught along the coast. These circumstances are referred to in the aggregation rules and the payoff rules.⁵⁶³ There were no scope rules on cod fishing at sea until the government started cutting its expenditure on financial support for fishing in the 1840s, setting certain criteria including days at sea fishing matching a reduction in support if violated.⁵⁶⁴ When legalizing coastal cod fishing in 1822, it continued the traditional prohibition of using *schrobnets* from November 15 to February 15 as scope

⁵⁵⁹ Ostrom, Gardner, Walker; *Rules, Games & Common-Pool Resources*; p.41-45

⁵⁶⁰ See Appendix 12 note 160 and note 560 and note 565 on the Notification [on coastal cod fishery] and Appendix 13 note 214 and note 560 and note 563 on the Home Regulations concerning the representatives of the Iceland and [North Sea] cod fishery from the Province of Southern Holland

⁵⁶¹ See Appendix 6 note 131 and note 133 and note 561 on the Form on the oath for the mates and fishers fishing near Doggerbank... this applied to the *hoekwant* fishery

⁵⁶² See the history behind Besluit van 06.12.1818 Staatsblad no.42 and Law of 15.03.1818 no.15 and Besluit van 13.11.1819 no.1 and Law of 31.12.1822 no.40 in **Regulating and supporting Dutch cod fishing financially**

⁵⁶³ See Appendix 9 note 159 and note 563 on the Regulations on practising coastal fishing in the state of Holland and Appendix 10 note 159 and note 563 on the Instructions for the commissioners managing the coastal fishing in the state of Holland and Appendix 13 note 214 and note 560 and note 563 on the Home Regulations concerning the representatives of the Iceland and [North Sea] cod fishery from the Province of Southern Holland

⁵⁶⁴ See **Reductions in financial support for cod fishing**

rules, expanding them in 1837 by prohibiting *singlenet* as well from November 15 to February 1. In case the fishers used long line it seems there was no prohibition.⁵⁶⁵ As the cod fishers at the beginning of the 1800s fished with hooks and long lines they paid attention to the scope rules and the prohibition because of its positive effect on the survival of larvae and juveniles in their nursery area in the coastal waters, and thereby its indirect impact on their fishery and provision.⁵⁶⁶ Tradition taught the fishers they had better refrain from fishing near the coast in winter if they wanted fish for future generations to catch. Their time frame extended well into their future, which may have had more to do with a preventive collective action than with solving an acute CPR dilemma. The long line cod fisher was paid individually according to his catch, encouraging him to protect the fish stock ensuring his future catch and income. The authorities met the information rule by informing everybody about new fishing laws via the *Kollegien* and the ship owners, distributing copies of laws to skippers on the vessels.⁵⁶⁷

The reason to the problem about maintaining the rule

After the liberalization very few laws remained. One was the boundary rule prohibiting fishing using *schrobnet* along the coast in winter; another was the pay-off rule branding the barrels for salted herring. The branding was for many years the certificate ensuring the quality of Dutch herring and the price. Here lay the reason to the problem about maintaining the rule, as foreigners liked to question the quality and then copy the brand to obtain a similar price. Because of the new independent and less strict circumstances (lack of authority rules), some of the Dutch ship owners started importing foreign herring pretending they were their own, salting and selling them in branded barrels. There came a fury when it was spotted, as if it were a personal insult to the Dutch. This was only part of the critique though. Fishing in general was criticized for being old fashioned and unwilling to make progress, without investments in new technology; the fishers and ship owners lacking *ondernemingsgeest* or an entrepreneurial spirit.⁵⁶⁸ The latter point of view assigned a new perception to fishing: the idea that traditional fishing methods and rules applied hitherto were inefficient. The opinion switched from the collaborative to the personal approach matching the liberal ideology. Being effective meant raising catch rates and income. The mandatory branding of barrels lasted until 1868 and 1879.⁵⁶⁹ By then too

⁵⁶⁵ See Appendix 12 note 160 and note 560 and note 565 on the Notification [on coastal cod fishery] and Law of 29.08.1837 no.56 and Nationaal Archief 3.11.05 inv.1

⁵⁶⁶ See **The cod (*Gadus morhua*)**

⁵⁶⁷ See **The permanent but informal financial support for North Sea cod fishing** and **The informal financial support for cod fishing along the coast**

⁵⁶⁸ Wekke Dean van der; *De ondergang van de (beug)visserij van Middelharnis*; p.27

⁵⁶⁹ Beaujon A.; *Overzicht der Geschiedenis*; p.296, Besluit 05.01.1868 and Staatsblad 7.5.1878 no.37 “Ten gevolge van deze wet zal de officieele stempel voor de gevulde haringfusten den 1sten Juni 1879

many fish were sold round it and control had become inefficient. The same was the case concerning the boundary rule prohibiting fishing along the coast in winter using *schrobnet*. The introduction of the *logger* vessel also introduced new fishing banks to herring fishery, as a coastal fisher introduced the *logger* and brought with him knowledge and expertise to the use of the new sea fishing vessel and its fishers and heritage.⁵⁷⁰ The accessible fishing grounds combined with the freedom for any fisher to salt his fish caused the fishing fleet to expand. In ... the law on *schrobnet* fishery in winter along the coast was lifted. In a very short time, the fishing fleet created its own appropriation problems of the CPR while too many fishers fished the limited area of the North Sea. At first, the outcome was positive, but then it declined. There were complaints about damage to fishing gear and harassment at sea. But not all Dutch ship owners and fishers fiddled the origin of the fish in their barrels or fished at new fishing banks in *loggers*. The cod fishers changed their *hoeker* vessel for the *sloep*, but they did not change fishing methods for higher efficiency.⁵⁷¹ They kept with traditions practising long line fishing, maintaining most of their rules prior to liberalization, meaning they collaborated on activities with relation to fishing without enjoying the immediate raise in catch and income as did their colleagues, but why did they refrain from change? It is likely; there was a correlation with those, who felt comfortable with the existing laws or rules prior to the liberalization, those who did not, and the reactions afterwards. Prior to the institutional change, the local rules became law, reflecting the fishing habits of the sea fishers who fished for cod near Doggerbank and salted their cod in barrels while at sea. The law did not match the habits and rules of the fishers fishing along the coast, bringing back fresh fish every odd day. The competitive sea fishers made sure, they were not allowed to salt their fish, so instead they smoked them. These unfair processing conditions influenced the reactions to liberalization finally allowing the coastal fishers to do, what they wanted to. Ship owners and fishers from Scheveningen soon registered *logger* vessels in Vlaardingen or Maassluis and went fishing for cod or herring in particular, in the North Sea. The ship owners and fishers maintaining traditional ways of fishing from before the liberalization belonged to the sea fishing community. They constituted an established network in the local society in Vlaardingen rooted in the fishing business and the maritime business. They had no need for change. The ship owners and fishers from Scheveningen had a strong network as well. This was why they so quickly responded to the change and signed vessels in at Maassluis or Vlaardingen starting the

ophoudende bestaan an alleen de gelegenheid open blijven om bij aankomst van den haring uit zee dezen Rijksambttenaren te doen keuren."

⁵⁷⁰ Buisman H.; *De Vlaardingse Koopvaardij in de tweede helft van de negentiende eeuw*; p.60, Kaart 1 *Haringvangplaatsen in de Noordzee* in accordance with Schippers A.W.; *Standplaatsfactoren der Grootte Haringvisserij*; Vlaardingen 1927, chap.1, p.9-13

⁵⁷¹ See **Change in working conditions**

logger business. Ostrom proposes six positively correlated characteristics of (in this case) ship owners and fishers adopting to changes in operational rules:

*"[They] share a common judgement that they will be harmed if they do not adopt an alternative rule. [They] will be affected in similar ways by proposed rule changes. [They] highly value the continuation activities from this CPR. [They] face relatively low information, transformation and enforcement costs. [They] share generalized norms of reciprocity and trust that can be used as initial social capital. The group appropriating from the CPR is relatively small and stable."*⁵⁷²

It is interesting that neither the coastal cod fishers nor the fishers fishing at sea during the first half of the 1800s faced a common-pool resource dilemma, yet their response to liberalisation was so different. The ship owners from Vlaardingen and Maassluis could afford working with a long time frame and preventive collective action because of their multiple sidelines and trade. The coastal ship owners and fishers on the other hand felt slighted as they had not had such options. They aimed at a similar surplus, and they probably were caught in the short-term desire for profit, losing the more profound strength of the cooperative fishing business.

The commitment is to follow the rules

Not all the vessels fishing for cod at sea or near the coast applied for financial support from the king from 1818 or 1822 to 1853. At least twice the number fished for cod at sea without registering as applicants.⁵⁷³ These numbers may include the vessels from the small towns along the Maas River fishing for cod all year. They too based their work on norms and traditions, except their norms and traditions were a little different to those of the ship owners and fishers receiving support. The small town ship owners and fishers had not participated in forming the original rules or laws for the support in 1818 or 1822, it was not their norms and traditions being recognized; therefore the later debate on the definition of the aggregation rules and their acceptance as applicants and participants in the *Kollegien*.⁵⁷⁴ The financial support was optional in spite of its legal status. The ship owners and fishers from Pernis, Zwartewaal and Middelharnis were capable of practising their version of cod fishing as long as they did not claim any support. Many of them did, but some chose to apply for support in intervals obtaining a limited recognition of their fresh cod fishing using their *hoeker*, *gaffel*- or *bezaan schuit* vessels. They still believed in their mutual way of fishing and continued practising the long line fishing for fresh cod even after the liberalization signifying an admirable persistence. Ostrom argues the reason self-

⁵⁷² Ostrom Elinor; *Governing the Commons*; p.210-214 the Dutch ship owners and fishers agree fairly well with Ostrom's proposal, presuming the small and stable group is similar to a family business network

⁵⁷³ See **Comparing estimates and comparing with more records on cod fishing**

⁵⁷⁴ See **Fresh cod or salted cod valid for financial support?** and **The importance of the vessel**

organized CPR users like the small town ship owners and fishers were successful was their boundary and authority rules, and their active forms of monitoring and sanctioning lacking tricky threats or punishments.⁵⁷⁵ Their biggest problem seems to have been the payoff rule in this case on the selling of fish partly because of the quarreling between Middelharnis and Vlaardingen on the right to the prime fish market and partly on the Belgian demand for fresh fish at the markets along the Schelde river. As one of the ship owners, P.L.Slis in Middelharnis predicted in 1854, a fresh cod preference among the buyers would cause a future rise in price making the effort worthwhile.⁵⁷⁶ The reason why some ship owners and fishers organized themselves with rules and monitor each other's compliance with these is that they design the rules themselves in relation to the CPR and the local community:

*"The commitment is to follow the rules so long as the most similarly situated individuals adopt the same commitment and the long-term expected net benefits to be achieved by this strategy are greater than the long-term expected net benefits for individuals following short-term, dominant strategies."*⁵⁷⁷

By the end of the 1800s, the exploitation of the cod stock hit these fishers and ship owners as well as everybody else.⁵⁷⁸ However, the original cod fishing towns up the Maas: Pernis, Zwartewaal and Middelharnis did not permanently change their fishing habits after the liberalization, the rapidly growing herring fishery had a negative sideeffect on cod fishing. The many *bom* vessels that had always fished for cod along the coast now fished all year long ignoring the authority rules coercing the seasonal ban on fishing, putting pressure on the nursery area of the cod, creating a CPR dilemma. The different kinds of cod fishing demonstrate that there were different reactions and thereby different consequences to the same change in the institutional development framework dependant on the existent rules and norms and traditions prior to the change. The reactions to change and the creation of a CPR dilemma was the beginning of an evolution in Dutch cod fishing that is perhaps now in reverse.⁵⁷⁹

Modern theory and old sources

Elinor Ostrom's application of game theory compares laws or rules on fishing with different games testing if changes in rules affect the structure of the games; here meaning the way

⁵⁷⁵ Ostrom, Gardner, Walker; *Rules, Games & Common-Pool Resources*; chap.14

⁵⁷⁶ See **The introduction of liberalisation and freedom of the individual fisher and Dutch fishery must act like any other business**

⁵⁷⁷ Ostrom Elinor; *Governing the Commons*; p.185-186

⁵⁷⁸ See **The fishers's means of dealing with a declining cod stock and Excluding fishers from fisheries' management**

⁵⁷⁹ See **Introduction**

of fishing.⁵⁸⁰ There are different types of games that reflect different sets of rules and thereby different working conditions and problems to the CPR in case of change in rules and obedience to rules. Today, the scope rules on how, when and where to fish are seen as rules with the probability of causing assignment problems to the CPR; that is problems of efficiency either in catch rates or profit or both. Assignment problems show in chicken games. Similar authority rules on the consequences of disobedience to any rule and boundary rules on the qualifications of the fishers in the fishing community may cause provision problems; that is problems of creating, maintaining or improving the fish stock. Provision problems show in assurance games. These are problems common in relation to fishing today.⁵⁸¹ Did the Dutch cod fishers show assignment problems or provision problems explicable in games, or did they face different problems? It is possible to compare games with Dutch cod fishing using the rules they applied, but it may not be a perfect match due to the discrepancy between modern theory and old sources. Dutch cod fishery experienced one major change in its structural situation during the 1800s: the liberalization, leaving two different CPR situations: the situation prior to the change with no CPR dilemma and the one afterwards with a rising CPR dilemma. In the situation with no CPR dilemma, the ship owners and fishers fishing at sea applying for support applied to all seven rules. In the same situation with no CPR dilemma, the fishers and ship owners fishing along the coast also applied all seven rules. In this situation with no CPR dilemma, the fishers and ship owners fishing independently applied position rules, boundary rules, aggregation rules and pay-off rules. None of the ship owners or fishers at this time showed signs of appropriation problems or provision problems. Rather, they assumed another explicative game called the assurance problem game when fishers worked in a mutually organized business communicating with one another reflecting the rules applied by the Dutch ship owners and fishers fishing for cod prior to the liberalization.⁵⁸² According to the assurance problem game, the fisher did not profit if fishing on his own. He only gained when fishing with others obtaining a collective benefit, and/or contributing to the mutual organisations in relation to fishing. In the situation with a rising CPR dilemma, the sea fishers and ship owners maintaining their own rules from before the liberalization kept applying these as did the fishers and ship owners fishing independently applying position rules, boundary rules, aggregation rules and pay-off rules. They played the same game as before the changes, but the external circumstances were different. Because the CPR had a rising dilemma, the sea fishers and ship owners adjusting to freedom applied the boundary rule, the pay-off rule and a very weak authority rule for some time, then they

⁵⁸⁰ Ostrom, Gardner, Walker; Rules, Games & Common-Pool Resources; chap.4

⁵⁸¹ Ostrom, Gardner, Walker; Rules, Games & Common-Pool Resources; chap.3

⁵⁸² Ostrom, Gardner, Walker; Rules, Games & Common-Pool Resources; chap.13

applied no rules, just like the fishers and ship owners fishing along the coast. Their approach working under no rules (without communicating) corresponded well with the prisoner's dilemma game. According to the prisoner's dilemma game, the fisher did not consider the preferences of other fishers, he fished as he pleased, and wherever possible. This was not exactly the case though inspite of the fact that fishers were keen on improving catch and earning good money, showing the problems of applying modern theory to old sources. There are two reasons. First, game theory is based on the neoclassical economic perception of a rational human being always aiming at maximizing profit, suggesting that persons playing the games always act rationally. This was not the case back in time – it probably is not the case today either.⁵⁸³ Second, game theory is an administrator's game rather than a fisher's game providing a one-sided answer to the problem.

A cumulative process

To better understand why the ship owners and fishers reacted differently towards the change in institutional and collective choice and the CPR dilemma situation, I complement with Edith Penrose' evolutionary resource based theory.⁵⁸⁴ The evolutionary economic theory is different to neoclassical theory in that it believes in the ability to do work in business by routine, transferring knowledge and remembering capabilities. The Dutch ship owners and fishers fishing for cod in the North Sea had had such routine, knowledge transfer and capability remembrance prior to 1800. Some managed to maintain these skills during the 1800s, while others did not. The evolutionary theory is a cumulative process of ever more complex structures creating more options for business advancement; hence the growth of the firm.⁵⁸⁵ Penrose' theory of growth recognizes norms and traditions a reliable source for what she calls the *resource* of knowledge along with learning and doing and the services provided based on these within the business.⁵⁸⁶ She also considers it valuable to the business to accumulate experience and expertise internally to provide for renewal and expansion. So, when the ship owners and fishers obtained more experience and expertise on the vessels at sea they had a better chance of surviving and improving their businesses. It was no coincidence that the well-established ship owners' families in Vlaardingen like De Zeeuw, who fished for cod (and herring) for generations, employed

⁵⁸³ Elinor Ostrom herself reserves her position on the question of rational action suggesting bounded rationality as an alternative, Ostrom E., Walker J.ed.; Trust & Reciprocity; 2005

⁵⁸⁴ Penrose Edith; The theory of the growth of the firm; 2009 Elinor Ostrom shows an awareness of a need for aspects of the evolutionary theory to her Institutional Analysis and Development Framework as a social-ecological system in Ostrom Elinor; Background on the Institutional Analysis and Development Framework; Policy Studies Journal, vol.39, no.1, p.7-27, 2011

⁵⁸⁵ Knudsen Christian; Økonomisk metodologi; bd.2, chap.9-10

⁵⁸⁶ Penrose Edith; The theory of the growth of the firm; p.XXXIII

skippers for many years from well-established skipper's families.⁵⁸⁷ They also employed skippers who were new to their business, hoping for a supplement of new knowledge and ways of doing things, inspiring the rest of the crew. In general, the ship owners fishing for cod before the changes in the middle of the 1800s built their business on the expertise of people in the local maritime community, represented by their many sidelines connected to fishing. The ship owners' engagement in the church and its school, teaching the young boys and girls some of the basic skills required in fishing underlined this. These activities expressed the ship owners' ability to spread the risk, diversify their activities, and thereby sustain the vicissitudes in maritime business including fishing.⁵⁸⁸

*"A special form of diversification, which in many cases is of great significance for the growth of the firm, involves an increase in the number of intermediate products that the firm produces for its own use."*⁵⁸⁹

Another type of growth presented by Penrose was the merging of firms as an alternative to acquisition. Firms in the same line merge to take advantage of each other's expertise becoming twice as good or even better together. The ship owners in Vlaardingen availed themselves much of merging in cod fishing.⁵⁹⁰ They did so because of its structure, but it seems they also did it to help the young ship owners along and support the older ones in their later days – apart from just doing business in fishing. The opportunity remained after liberalization and the introduction of limited companies. Family network was important and family business remained the dominant in Dutch cod fishing throughout the 1800s. Penrose ascribed the faculty for initiating growth to the entrepreneur in the firm. She distinguished between two kinds of entrepreneurs: the product-minded good-will builder and the empire builder.⁵⁹¹ The product minded good-will builder initiated growth based on existing sources and knowhow, while the empire builder expanded in new fields. Many ship owners fishing for cod at sea during the first half of the 1800s had sidelines and managed their business well as such. Some had more fishing vessels and vessels engaged in trade than others, they also owned more workshops and shipyards, but overall their businesses went well because of their flexibility in management and their well-established family network lasting beyond the changes in the middle of the century. You

⁵⁸⁷ See **Skippers' network within the De Zeeuw family business** and **Skippers on vessels in the De Zeeuw family business network** and **Dispersion of family members within fishing business** and **Skippers' family network in the *partenrederij* and the limited company** and **Close or peripheral relations among skippers working for the same ship owner** and Penrose Edith; *The theory of the growth of the firm*; p.41-42

⁵⁸⁸ Penrose Edith; *The theory of the growth of the firm*; chap.4-7 and Knudsen Christian; *Økonomisk metodologi*; bd.2, p.336-338

⁵⁸⁹ Penrose Edith; *The theory of the growth of the firm*; p.128

⁵⁹⁰ See **Joint companies of father and son** and **Flexibility into generations' ownership or between cod and herring fishery** and **Social networkng and shared ownership**

⁵⁹¹ See **No return?** and Penrose Edith; *The theory of the growth of the firm*; chap.3

may call them product-minded good-will entrepreneurs. The ship owners and fishers fishing for cod along the coast managed their business under less fortunate circumstances imposed on them by the authorities and their sea fishing colleagues. The annoyance of unfair treatment initiated a desire for change and entrepreneurial spirit showing in their reaction to liberalization after the 1850s, introducing the *logger* and the cotton net. Some of the ship owners fishing at sea joined the *logger* fishers in their initiative, complementing by setting up limited companies instead of traditional family business. These ship owners did not belong to the well-established family network, they engaged in fishing business themselves or within the last generation or two. Their entrepreneurial innovation considered the shortsighted profitability of fishing; it did not consider any long-term CPR dilemma.⁵⁹² In a resource based theory like Penrose' focus is not (primarily) on transaction costs, but on the reason why the cost of organizing certain activities varies between businesses.⁵⁹³ What it is that makes one company respond differently to the same technology and the same input as other companies? According to Penrose, the answer lies in the qualifications, the abilities, the knowledge and experience within the business and how they apply these; called the competitive advantage. In Dutch cod fishing, the different reactions to liberalization stem from a social, educational and cultural tradition with strong roots in the local community and the family network.

Cognitive intelligence in fishing business

Ostrom agrees with Camerer and Fehr who suggest the reason to people's (un)expected actions is found when applying bounded rationality to game theory, acknowledging that people change their mind and compromise.⁵⁹⁴ Camerer and Fehr distinguish between two groups of people: the reciprocating, altruistic people and the self-regarding people. The altruistic people are other-regarding, reciprocating and keen on punishing violations of norms. The self-regarding people are not bothered about other people if it makes no profit, nor about punishing violations. The reciprocators are complementing, bounded rational and cooperative. They like to match others by copying, whereas the self-regarding people are substituting, rational and competitive in their way of being; they prefer doing the opposite to others. Depending on who forms the majority or the main character in a given community they affect the others' behaviour and thereby the main tendency within the

⁵⁹² See **Knowing what is what is...** and Lazonick William; Innovative Enterprise and Historical Transformation; Oxford Journals, Enterprise and Society; 2002, March, p.3-47 Lazonick criticizes Penrose' idea of innovation saying it lacks concrete proposals

⁵⁹³ Madhok Anoop; Reassessing the Fundamentals and beyond: Ronald Coase, the Transaction Cost and Ressource-Based Theories of the Firm and the Institutional Structure of Production; Strategic Management Journal, vol.23, no.6, p.535-550, 2002

⁵⁹⁴ Camerer Colin F., Fehr Ernst; When Does "Economic Man" Dominate Social Behavior?; Review, Science, vol.311, p.47-52, 6 January 2006

community. The reciprocators prefer a game called the beauty contest game because it is illustrated by buying shares at the stock exchange cheaply and selling them at a higher price, having the ability to spot attractive shares at an early stage, as if it were a fashion show. It sounds a competition, but it requires an ability to know what others do or like by complementing. The self-regarders play the Nash-equilibrium game, which is about guessing the act of different people in a given situation correctly. It seems a substitution, but it is more of a competition replicating others. Distinguishing becomes interesting to Dutch cod fishers when summarizing that the self-regarding, homogeneous, rational and substituting actors are good at predicting economic actions, while the reciprocate, heterogeneous, bounded rational and complementing actors are better at unpredictable or complex economic actions.⁵⁹⁵ The way they influence each other is crucial; the expression of the cognitive intelligence or the cognitive hierarchy. It may help explain why the Dutch fishers reacted differently to the same situation. Among the fishers fishing at sea in the first half of the 1800s the majority seemed very reciprocal and complementing in their structuring their business. When setting the rules for fishing they made sure it had a punitive measure: fishers not obeying to rules received no support (and no network benefits). But there was no judicial punishment and therefore the minority of self-regarding, substituting fishers either joined or fished like they used to on their own. As the rules were based on norms and traditions, their independence was acceptable. Fishers fishing along the coast in the first half of the 1800s complied with the rules that were already made, but it is less obvious that the majority did so because of being reciprocal. It is more likely many cooperated out of necessity or wish for personal profitability, being themselves self-regarding and substituting, many coastal fishers chose a career on a trading vessel equally as good as fishing. Liberalization became an icebreaker to the self-regarding, substituting minorities, who found Adrien Eugene Maas from Scheveningen an inspiration in the second half of the 1800s. Their new substituting and competitive approach to fishing then had an influence on the former majority of reciprocal and complementing fishers to a degree that they lost their position. They sustained within their own network for a limited amount of time depending on the internal resources within the business – and on the external ones as well.

Repetition and reverse

Since the 1800s, there has been a long and ongoing, international debate on what to do about the changes in the fishers's attitude and the changes in the fish stocks not least. Two hundred years after the Dutch ship owners asked king Willem I for support to maintain their business because there was little call for their fish. One hundred years after they

⁵⁹⁵ Camerer Colin F., Fehr Ernst; When Does "Economic Man" Dominate Social Behavior?; p.49-52

stopped fishing for cod in sailing vessels using long line, the Dutch fishers worry what to do when there is no cod to catch at sea to meet the demand, or when restrictions on catch are so that they cannot fish at a scale to survive.⁵⁹⁶ ICES is concerned as well.⁵⁹⁷ They involve many scientists and do research in almost any possible maritime field. The sad thing is they have not yet found a solution to the exploitation of the sea. The short period of technological advancement and financial benefits contrasts the long precedent period of traditional fishing: quickly ruining what the ship owners and fishers had the ability to preserve for centuries possessing no scientific skills or expertise.⁵⁹⁸ The history of Dutch cod fishing in the 1800s shows. One of the hurdles to overcome in the battle of exploitation has been the fisheries management, developing from liberal freedom to national institutions' administration to a so-called bottom up administration of fishing involving the fishers themselves in decentralised co-management.⁵⁹⁹ Arguments for the latter are among others:

*"...users are likely to become more knowledgeable of, committed to, and supportive of regulations if they have had a say in the process... co-management is not so much a question of reinvention as of rediscovery and renewed commitment to the "meso-level" of governance, involving civil society and voluntary associations."*⁶⁰⁰

Projects of fisheries co-management with degrees of control and free riding have had more or less success. The Dutch tried a new concept in 2008 to loosen the tight network of local family network among fishers. They created new groups of fishers, people from the fishing industry and scientists on topics of interest. The new groups made the participants realize they had mutual interests with colleagues in different communities; creating opportunities for cooperation concerning issues like sustainable fishing that were otherwise difficult to manifest.⁶⁰¹ The new groups also expressed deliberate work on trust enabling cooperation between the existing family networks, the fishing industry and scientists. The initiative came about after two decades working with groups of fishers within the so-called Biesheuvel system. This work was considered co-management, yet it coordinated the individual fishers and their individual transferable quota, ITQ; there was no

⁵⁹⁶ Browman Howard I., Stergiou Konstantios I. idea and coordination; Theme section, Perspectives on ecosystem-based approaches to the management of marine resources; Marine Ecology Progress Series, vol.274, p.(269-270)269-303, 2004

⁵⁹⁷ See the introductory part to **Dutch cod fishing in the 1800s**

⁵⁹⁸ See **Fishing for cod at sea** and **Fishing for cod along the coast**

⁵⁹⁹ Jentoft Svein, McCay Bonnie J., Wilson Douglas C.; Social theory and fisheries co-management; Marine Policy, vol.22, no.4-5, p.423-436, 1998

⁶⁰⁰ Jentoft Svein, McCay Bonnie J., Wilson Douglas C.; Social theory and fisheries co-management; p.423, 424

⁶⁰¹ Vos Birgit I. de; Mol Arthur P.J.; Changing trust relations within the Dutch fishing industry: The case of National Study Groups; Marine Policy, vol.34, p.887-895, 2010

cooperation or responsibility between institutions or fishers.⁶⁰² As a next step in the Dutch fisheries management, the new concept in 2008 expressed a validation of trust and reciprocity. The groups engage the participants in working together on projects of mutual interest such as having a Marine Stewardship Council Certification, MSC for their particular fishery. The project encourages the group members to copy one other, because cooperation is beneficial to everybody.⁶⁰³ The new concept in 2008 shows a means for converting the self-regarding, substituting, competitive tendency prior to and to some extent within the Biesheuvel system into an other-regarding, cooperative, complementing tendency. This is a new and different approach to fisheries management holding opportunities as well as a pitfall. The many opportunities lie in the fact that the groups from 2008 are concerning flatfish fishery. In the future, initiatives may be on demersal species like cod, reversing the evolution of Dutch cod fishing from a time of maximizing profit to a time of coherent ecosystems and human systems. The pitfall may occur if fishers and scientists forget they must apply their cognitive intelligence to the use of their own resources, knowledge and knowhow to sustain and grow; not to the natural resources in the sea.⁶⁰⁴

⁶⁰² Vos Birgit I. de, Tatenhove Jan P.M. van; Trust relationships between fishers and government: New challenges for the co-management arrangements in the Dutch flatfish industry; Marine Policy, vol.35, p.218-225, 2011 and Hoof Luc van; Co-management: an alternative to enforcement?; ICES Journal of Marine Science, vol.67, p.395-401, 2010

⁶⁰³ Cook Karen S., Cooper Robin M.; Experimental Studies of Cooperation, Trust and Social Exchange; Trust & Reciprocity; Ostrom, Walker ed.; chap.8, p.209-244

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Conclusion

*“Resource problems are not really environmental problems: They are human problems that we have created at many times and in many places, under a variety of political, social, and economic systems.”*⁶⁰⁵

This thesis is particular as it refers to archival material on the financial support to the ship owners and relates it to a shipping company's records and unregistered material on fishing, the reports on cod fishing made by the local authorities and the governmental institutions, within the legal framework.⁶⁰⁶ By connecting all, discrepancies between the sources occurred and new aspects of cod fishing history appeared causing a re-registering of archival material and a need to reconsider cod fishing history with connection to the 1800s.⁶⁰⁷ The consequential description in **Dutch cod fishing in the 1800s** provides a new perspective on the evolution in cod fishing: from coherent ecosystems and human systems to maximizing catch rates (and possibly again to focusing on sustainability and co-management). It tells how laws on fishing changed and how ship owners and fishers reacted, affecting their means and ways of fishing for cod, indirectly contributing to a decline in the cod stock. By further looking at how the ship owners structured their fishing business and cooperated with the fishers within a social network, another aspect of cod fishing history reveals; it is described in **Dutch cod fishers in the 1800s**. When knowing the interrelationship between the men involved in fishing business, the records obtain a different meaning. A priest or a lawyer being shareholder in a vessel no longer seems odd knowing they were the younger brothers engaging in the family fishing business in spite of their “inadequate” professions, manifesting the family networks and family business in the fishing communities.

The archival material on the financial support to the ship owners contains the basis for granting the support: the catch records on salted cod from 1818-1853. These records were decisive for this thesis being about Dutch cod fishing in the North Sea, and though the connection with the other sources shows they did not represent all of Dutch cod fishing at the time, they show a certain attitude towards cod fishing that is interesting. This attitude changed along with the institutional and political changes in the 1850s, and as a

⁶⁰⁵ Ludwig Donald, Hilborn Ray, Walters Carl; *Uncertainty, Resource Exploitation, and Conservation: Lessons from History*; Reprinted by permission from *Science*, 60:17,36,1993; *Ecological Application*, vol.3, no.4, p.547-549, 1993

⁶⁰⁶ Nationaal Archief toegang no.3.11.04 and 3.11.05 and Stadsarchief Vlaardingen toegang 0017 and unregistered material no.490 and *Verslag over de Zeevisserijen* and *Verslagen van der Staat der Nederlandsche Zeevisserijen* and *Naamlijste der Boekhouders, Schepen en Stuurlieden*

⁶⁰⁷ There is no history on Dutch cod fishing in the 1800s, but there are many articles and books with (an indirect) connection to cod fishing

consequence along with the change in the historical sources on cod fishing from 1860-1911. Now, the support had gone, and the catch data was not as detailed as the data from the first half of the century, making a comparison difficult. It is possible to analyse the development in cod fishing during the 1800s by looking at the sidelines to fishing and considering qualitative sources. I have thus collected fisheries data and supplied with the adjacent comments on prices and market relations when convenient. The data shows a decline in catch rates and a rise in profits. One of the most common factors mentioned in Dutch fishing history of the 1800s is the introduction of the *logger* vessel in the 1860s. It is considered the reason to economic progress in Dutch fishing. Fishers using the *logger* applied *schrobnet* or trawl. The ship owners and fishers fishing for cod in the North Sea objected to trawl because of its damaging effect to the seabed and its bycatch of juveniles; instead, they continued using *sloepen* vessels fishing with long line almost to the end of the 1800s. When presenting the cod fishers' reaction to change, I present part of Dutch fishing history at the time of technological development that is not well known or recognized. The coastal fishers' general reaction to change was different to the sea fishing fishers. They objected to the seasonal ban on fishing along the coast. Along with the increase in trawling, customary *schrobnet* fishing in nursery areas in winter affected the cod stock in the North Sea, forcing coastal cod fishers to discontinue their fishing. This is historical evidence to how the fisheries affected the North Sea fish populations as well as the fishers and ship owners.

Another essential change in cod fishing in the 1800s was the change in business structure and the attitude towards fishing. In the beginning of the 1800s, ship owners ran family businesses and made use of thick social networks. This had an influence on the ownership of the vessels because of the common *partenrederij*, shared ownership, which again had an impact on the vessels going to sea fishing. The family business structure and the social interrelationship made way for limited companies when more men wanted to profit from the introduction of the *logger* and the trawl fishery in the second half of the century and became share holders. The family business' feeling of responsibility towards future generations' ability to fish for cod did not cling to the limited companies' shareholders, who had little connection to the fishing community. Connecting the history of fishing business with that of the actual fishing I illustrate how there was a change in perspective from coherent ecosystems and human systems to maximizing catch rates and profit maximization. Only recently, as fear of collapse of the cod stock in the North Sea rises, a change back to a coherent ecosystem and a human system is brought into focus. The references in the current debate are trawl surveys from the 1900s. The debate needs a reference showing it is possible to practise sustainable cod fishing in the North Sea; this thesis is such reference. Elinor Ostrom made a framework for analysis of research based

on empirical data on users of common-pool resources. I apply her institutional analysis and development framework, IAD to the Dutch cod fishing data showing a picture of the strategies the ship owners and fishers fishing for cod made before and after the reforms in the 1850s. This picture shows how and why some ship owners' businesses kept a sustainable fishing while others did not. Edith Penrose made a theory of the growth of the firm based on knowledge and experience within the firm. I consider the strategies of the ship owners according to her theory to understand why the businesses with sustainable strategies did well while those with different strategies did not. It was no coincidence, but it is interesting how the ship owners' family business structure matches Penrose' management theory of growth in the firm. To make these observations applicable to today's fishers and ship owners I introduce the role of the self-regarding and other-regarding people and their competitive and cooperative ways of being, respectively. I hereby provide historical material and historical research as a source of inspiration for future aspiration for a balance of resource conservation and management and human concerns.

Een spiering uitwerpen om een kabeljaauw te vangen

How and why the Dutch fished for cod 1818-1911

Summary

The history of Dutch cod fishing evolved in reverse order to the evolution of today. Now, the old perspective is the perspective focusing on maximizing catch rates, whereas in the 1800s this was the new perspective. Today, the new perspective is focusing on (coherent) ecosystems and human systems, while in the 1800s this was rejected as old-fashioned by judicial reforms.

Dutch cod fishing in the 1800s was a line and hook fishery along the coast and at or around Doggerbank in the North Sea. Cod fishing took place in summer and in winter depending on the time of the herring fishery or the trade with Spain and Portugal. The fishing community set rules on fishing and curing the fish, and worked according to these rules for generations. At the beginning of the 1800s these rules became basis for a financial subsidy to the cod fishers granted by the king lasting to the 1850s. Due to unrest and political change elsewhere in Europe and financial problems domestically, the politicians in the Dutch parliament then restricted the king's role and influence in the monarchy and began liberalizing the laws including those on fishing. The freedom was not new to the ship owners and fishers; it was the authorities' disrespect to their rules that made the difference. No one cared if the fishers followed the rules or not, so many of the fishers started fishing as they pleased. The subsequent time is considered a time of progress and initiative because many fishers took advantage of new technology and started catching more fish and earning more money. It became a time when people outside the fishing community paid attention to the progress in fishing and invested in the new limited companies that came into existence. Only by the end of the 1800s did the authorities notice the ship owners and fishers who had not rejected their old means of fishing or their own rules on fishing. They had objected to the new technology because of its damaging effect on the seabed and the nursery area to the juveniles, but they were met with no sympathy until they started resigning from fishing because of decline in the cod stock. The authorities finally agreed to support scientific research on the state of the fish stock and the fishery. A case study and a selective analysis of the structure of fishing business, family business in particular explains the profound impact of the changes.

Elinor Ostrom works with the consequences of change of rules in relation to common-pool resources like fishing. When the empirical data from Dutch cod fishing history is analysed using Ostrom's theory and game theory, they show a picture of the strategies the ship owners and fishers made before and after the reforms explaining how and why some maintained a sustainable fishery and others did not. Edith Penrose's theory on the growth of the firm emphasizes the accumulated knowledge and experience within a firm as a valuable asset for surviving obstacles and improving business. It confirms the picture on sustainable fishery and adds another perspective to reflect on concerning current cod fishing.

Een spiering uitwerpen om een kabeljaauw te vangen

How and why the Dutch fished for cod 1818-1911

Resume

Historien om hollandsk torskefiskeri er historien om en omvendt udvikling i forhold til udviklingen i nutidens torskefiskeri, idet man i dag betragter det at øge fangstraterne som forældet, mens det i 1800-tallet var et nyt fænomen. Idag derimod stræber man efter et bæredygtigt økosystem i havet og et godt socialt miljø i fiskebyerne, mens det blev afvist som gammeldags af juridiske reformer i 1800-tallet.

I 1800-tallet fiskede man torsk med line og krog i Holland. Man fiskede langs kysten og ved eller omkring Doggerbanke i Nordsøen. Torskefiskeriet fandt sted om sommeren og om vinteren afhængigt af sildefiskeriet og handelen med Portugal og Spanien. Fiskerne havde deres egne regler for fiskeriet og behandlingen af fiskene, som de havde arbejdet efter i generationer. I begyndelsen af 1800-tallet dannede reglerne grundlag for en økonomisk støtte fra kongen til torskefiskerne, som varede indtil 1850'erne, men på grund af uroligheder og politiske forandringer rundt om i Europa og økonomiske problemer nationalt i Nederlandene, så valgte politikerne i parlamentet at indskrænke kongens rolle og indflydelse i monarkiet og begynde en liberalisering af lovgivningen, inklusiv lovene vedrørende fiskeriet. Friheden var imidlertid ikke ny for rederne og fiskerne; det var derimod myndighedernes disrespekt over for deres oprindelige regler for fiskeri, og det var det, der gjorde en forskel. Det betød ikke længere noget, om fiskerne overholdt reglerne, så mange holdt op med det og fiskede, som de havde lyst. Tiden der fulgte betragtes som en fremgangstid fyldt med initiativ, fordi fiskere benyttede sig af nye teknologiske muligheder og øgede deres fangst og deres indtjening. Det blev en tid, hvor folk uden for fiskeriet fattede opmærksomhed for fremgangen i fiskeriet og investerede i de nye aktieselskaber, der opstod. Det var først i slutningen af 1800-tallet, at myndighederne bed mærke i de redere og fiskere, der ikke var holdt op med at fiske med line og krog og følge deres egne regler fra før liberaliseringen. De havde modsat sig den nye teknologi på grund af dens ødelæggende effekt på havbunden og vækstområderne for ynglen, men de blev ikke mødt med sympati, før de begyndte at forlade fiskeriet på grund af nedgang i torskebestanden. Da accepterede myndighederne endelig at støtte videnskabelige undersøgelser af fiskebestandenes tilstand og fiskeriet. Et case studie og en selektiv

analyse af strukturen i fiskerivirksomheden, særligt familievirksomheden, forklarer forandringernes gennemgribende betydning.

Elinor Ostroms arbejder med konsekvenserne af forandringer af regler med relation til common-pool resources som fiskeri. Når det empiriske materiale fra det hollandske torskefiskeris historie er analyseret med Ostroms teori og spilteori, viser det et billede af de strategier, rederne og fiskerne benyttede før og efter reformerne og forklarer, hvordan og hvorfor nogle bevarede et bæredygtigt fiskeri, mens andre ikke gjorde. Edith Penrose' teori om vækst i virksomheden fremhæver den akkumulerede viden og erfaring i virksomheden som et værdifuldt aktiv for at overkomme forhindringer og forbedre virksomheden. Det bekræfter billedet af strategierne for det bæredygtige fiskeri og der tilføjes endnu et perspektiv til at reflektere over torskefiskeriet idag.

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Appendix

Appendix 1 note 35

Names of fishing vessels from Maassluis 1763-1826

Dutch boys' and girls' names were very common names for fishing vessels. In addition, religious words, technical terms from fishing or expressions of gratitude or thoughtfulness find their way to the fishing vessels. The names were a means of communication among the fishers, and the vessel sometimes had several names during its life time. Their names became evidence of what was going on at the time.

1760-70s

Bartholemeus, *St. Nicolaas*, *St. Maria Magdalena*, *Jonge Simon*, *Cabeljauw* [cod], *Vriendschap* [friendship], *Eendracht* [concordance, unity]

1780s

Vertrouwen [confidence, trust], *Vrijheit* [freedom], *Goede Verwachting* [good hope/expectation], *Liefde* [love], *Dankbaarheid* [thankfulness], *Harmonie*, *Geloof* [faith[in God]], *Koning van Preussen* [king of Prussia]

1790s

Zeevrucht [shellfish], *Hopende Visser* [hoping fisher], *Yslands Welvaren* [thriving Iceland [fishing]], *Haringvisserij*, *Maassluis Welvaren* [thriving Maassluis [fishing]]

1800-10

de Hoop [the hope], *Vreede* [piece], *Verdraachzaamheid* [tolerance], *Koophandel* [trade], *Goede Oppmerk* [good attention], *Goede Hoop* [good hope], *Groote en Kleine Visserij* [herring and cod fishing], *Gerechtigheid* [justice, fairness], *Zeegewin* [gain/prize from the sea], *Perseverance*, *Nooit gedacht* [never summoned]

1814-26

Fortuna, Nieuwe Hoop [new hope], *Verwisseling* [renewal, change], *Op Hoop van Zegen* [hoping for a blessing/keeping one's fingers crossed], *Algemeen Belang* [general importance]

Source:

Stadsarchief Vlaardingen:

Lijsten van alle zodanige Schepen als te visschen zijn uitgevaren van Maas-Sluijs het zij naar de Noordzee, Ysland of ten Haring die vrij van s'Lands Impost opgegeven door Gecommitteerden van de Visscherij te Maas-Sluijs Sedert den Jare 1763

Appendix 2 note 40

North Sea			Iceland		
Town	_STAT_	SaltCod	town	_STAT_	SaltCod
Delfshaven	N	2			
Delfshaven	MIN	0			
Delfshaven	MAX	0			
Delfshaven	MEAN	0			
Delfshaven	STD	0			
Dordt	N	1			
Dordt	MIN	104			
Dordt	MAX	104			
Dordt	MEAN	104			
Dordt	STD	,			
Maassluis	N	232	Maassluis	N	85
Maassluis	MIN	0	Maassluis	MIN	0
Maassluis	MAX	339	Maassluis	MAX	39
Maassluis	MEAN	135,3	Maassluis	MEAN	22,4
Maassluis	STD	53,9	Maassluis	STD	7,2
Middelharnis	N	45	Middelharnis	N	10
Middelharnis	MIN	0	Middelharnis	MIN	16
Middelharnis	MAX	1910	Middelharnis	MAX	34,5
Middelharnis	MEAN	167	Middelharnis	MEAN	23,3
Middelharnis	STD	276	Middelharnis	STD	5,4
Pernis	N	154	Pernis	N	12
Pernis	MIN	10	Pernis	MIN	12,5
Pernis	MAX	336	Pernis	MAX	28,5
Pernis	MEAN	119,4	Pernis	MEAN	21,7
Pernis	STD	72,4	Pernis	STD	4,5
Vlaardingen	N	858	Vlaardingen	N	129
Vlaardingen	MIN	0	Vlaardingen	MIN	0
Vlaardingen	MAX	1610	Vlaardingen	MAX	40
Vlaardingen	MEAN	141,3	Vlaardingen	MEAN	23,6
Vlaardingen	STD	75,9	Vlaardingen	STD	7,6
Zwartewaal	N	94	Zwartewaal	N	26
Zwartewaal	MIN	0	Zwartewaal	MIN	8,5
Zwartewaal	MAX	258	Zwartewaal	MAX	31
Zwartewaal	MEAN	109,1	Zwartewaal	MEAN	22,1
Zwartewaal	STD	56,6	Zwartewaal	STD	6,2

N = number of observations, that is vessels landing tonnes of salted cod 1818-1853

MIN = minimum tonnes of cod landed among the observations in the town 1818-1853

MAX = maximum tonnes of cod landed among the observations in the town 1818-1853

MEAN = average amount of tonnes landed in the town 1818-1853

STD = standard deviation, shows how much each observation deviates from the average observation, or how much each vessel's tonnes of cod landed varies from the mean

source: Nationaal Archief den Haag, toegang 3.11.05 inv.1-2

Appendix 3 note 41

Estimating the time spent fishing and the time spent landing, loading and sailing to and from the fishing grounds.

CPUE = number of salted cod / time fishing for cod⁶⁰⁸

number of salted cod = tons of salted cod x 32⁶⁰⁹

time fishing for cod = time at sea – time landing

time at sea = DOAN + (365-DODN)⁶¹⁰

time landing = number of trips x 4 + ((number of trips – 1) x 2)

A random example from Maassluis from 1821 shows ship owner Maarten Dirkzwager, who applied for *premie* for three vessels fishing for cod in the North Sea: *'t Algemeen Belang*, *de Hoop* and *Maria*.

Town	YOD	MOD	DOD	DODN	YOA	MOA	DOA	DOAN	Trip	duration	time landing	time fishing	cpue of salted cod	No of salted cod	Tons salted cod
Maassluis	1821	12	26	360	1822	3	21	80	2	85	10	75	31,57	2368	74
Maassluis	1821	12	26	360	1822	3	28	87	2	92	10	82	34,73	2848	89
Maassluis	1821	12	26	360	1822	4	4	94	2	99	10	89	24,81	2208	69

They all left for their first trip fishing on 26th of December 1821 and arrived back from their last trip in late March or beginning of April 1822. They made two trips each this winter. The

⁶⁰⁸ Formula given to me by Brian McKenzie

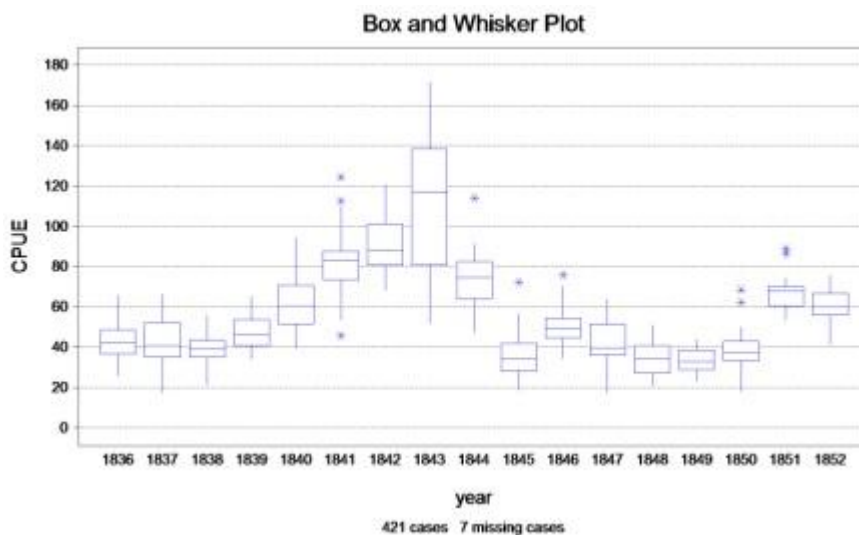
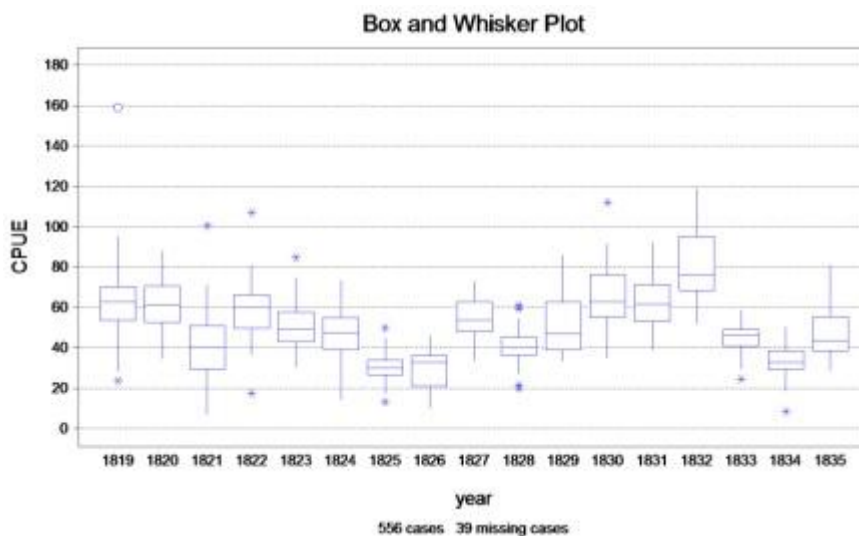
⁶⁰⁹ A barrel of salted cod contained an average of 32 cod according to Nationaal Archief 3.11.05 inv.1, while by the end of the century it had augmented to 35 cod, according to Hoogendijk A.Jr.; Grootvisserij op de Noordzee; Tjeenk Willink, Groningen 1894, p.196

⁶¹⁰ DOAN = date of arrival number DODN = date of departure number. Because it is not possible to make calculations using months and dates, each day of the year has a number, in total 365, and the calculations include these numbers instead

vessel landing the biggest amount of cod also used the biggest effort per (fishing) unit, but it did not stay the longest time at sea fishing. The vessel staying the least time at sea fishing did not land the least amount of cod, nor did it use the least amount of effort per unit.

Source:

Nationaal Archief den Haag, toegang 3.11.05 inv.1-2



This was the CPUE of the cod fishing from 1818-1853 using the formula explained above.⁶¹¹

⁶¹¹ Kristen Barfod assisted with this estimate

Appendix 4 note 44 and 388 and 398 and 402

Naamlijste der Boekhouders, Schepen en Stuurlieden van de Haringshepen in 't Jaar ...

Dirk de Zeeuw

- 1814-1831; Gelukkige Verandering; C van der Windt

Wed. Dirk de Zeeuw

- 1832; Gelukkige Verandering; A van der Windt
- 1834-1836; Gelukkige Verandering; A van der Windt
- 1837; Zelden Rust; A van der Windt
- 1841-1843; Jonge Aletta; A van der Windt
- 1845-1848; Jonge Aletta; A van der Windt

Wed. Dirk de Zeeuw

- 1835-1837; Jonge Dirk; C van der Windt
- 1841-1843; Jonge Drik; G van der Windt
- 1845-1848; Jonge Dirk; G van der Windt

Rederij de Hoop

- 1830-1832; Noordzee; A van Rooijen
- 1834-1837; Noordzee; A van Rooijen
- 1841-1843; Noordzee; Jan Rijke
- 1845-1848; Noordzee; Jan Rijke

Rederij de Hoop

- 1841-1843; Nijverheid; J Schouten
- 1845-1848; Nijverheid; J Schouten

Stadsarchief Vlaardingen toegang 0017 inv.1-6

Dirk de Zeeuw

- 1832-1837; Jonge Dirk; C van der Windt
- 1838-1849; Jonge Dirk; G van der Windt
- 1850-1853; Jonge Dirk; P Ommering

Rederij de Hoop

- 1814-1831; Gelukkige Verandering; C van der Windt
- 1832-1836; Gelukkige Verandering; A van der Windt
- 1837; Zelden Rust; A van der Windt
- 1838-1853; Jonge Aletta; A van der Windt

Nationaal Archief toegang 3.11.05 inv.1-2

Dirk de Zeeuw

- 1820-1828; Gelukkige Verandering

Wed. Dirk de Zeeuw

- 1829-1836; Gelukkige Verandering
- 1837-1843; Jonge Aletta
- 1845-1852; Jonge Aletta

Wed. Dirk de Zeeuw

- 1829-1832; Vrouw Neeltje
- 1835-1841; Vrouw Neeltje

Rederij de Hoop

- 1829-1831; Noordzee
- 1833-1850; Noordzee
- 1852; Noordzee

Rederij de Hoop

- 1830-1852; Nijverheid

Hitherto, these companies were regarded as one: *Rederij de Hoop*

Appendix 5 note 131 and note 133

My translation

Reglement en Instructie voor Commissarissen, onder den Titul van Leden van het Committé tot de Zaken van de Groote Visscherij der Bataafsche Republiek

[Regulations and instructions on commissioners being members of the committee on the matters concerning the *Groote Visserij* in the Batavian Republic]

Article 1

A Kollegie of commissioners exert matters concerning the Groote Visserij under the name of *Committé tot de Zaken van de Groote Visscherij der Bataafsche Republiek* and under the supervision of the executive power of the Bataafsche Republiek

Article 2

The Kollegie has 9 members

The members must have an interest in the herring fishery of this country

They are nominated by the book keepers of the towns and acknowledged by the executive power

Vlaardingen* 4 members

Maassluis* 2 members

Enkhuizen 2 members

de Rijk 1 member

If a vacancy, the book keepers in the town decide by election who to nominate, and the person is acknowledged by the executive power

Article 3

If another town has more than 15 vessels fishing for herring the Kollegie may nominate a member from that town to join the meetings of the Kollegie. If another town has more than 40 vessels fishing for herring the Kollegie may nominate two members from that town to join the meetings, requesting the acknowledgement of the executive power

Article 4

The Committée has the power applied to it by the *General Placat* and the *Ordonnantien* on herring fishing in the Republic, decided and laid down according to the criteria of the financial support

Article 5

The Kollegie is free to contact the executive power whenever needed concerning the herring fishery, and if permission for sending *Jagers* to sea via the Elbe or the Weser river is needed, dispense for the previously mentioned *Placat* and *Ordonnantien* and a reference may suffice.

Article 6

The Kollegie holds its meetings in The Haag at the place it is obliged to

Article 7

The Kollegie engages its secretary asking for the executive power's approval, sending a recommendation and instructions

Article 8

At the recommendation of the Kollegie and the acceptance of the executive power, the Kollegie engages persons who are sworn in as *Ontvangers* of *Lastgeld* ** the Kollegie must be cautious choosing satisfying persons for the job, and upholding the wage of 2,5% of the penningen on *Pekelharing* and 5% of the penningen on the fresh herring received.***

Article 9

Each year, the president is elected by a majority of votes by the members of the Kollegie. The president may call an annual general meeting or an extraordinary general meeting when notifying the executive powers. The secretary facilitates all negotiations and decisions by the members of the Kollegie in favour of the herring fishery

Article 10

The first meeting takes place the first Monday in March each year, provided the closed water allows for it. Points for the agenda on the forth coming meeting are presented

Article 11

In relation to the presentations of points for the agenda at the first meeting, the members should ask themselves and others if they have any issues of concern and worth mentioning; including matters concerning the coastal herring fishery

Article 12

The second meeting takes place the first Monday in May at which the points on the agenda decided on and necessary for the benefit fo the herring fishery shall be discussed

Article 13

In connection with the meeting in May, and in the presence of everybody, as appointed by the executive power, the Kollegie must consider the account and responsibility of the seated board and administration of the *penningen*; and further among the different provinces. In case any province needs consider the account and responsibility at any time and place but the one set by the executive power, it is at its own account

Article 14

No later than ultimo May, the account and responsibility is sent to the executive power in order to obtain subsidies and for the commissioners to respond to the national account concerning the use of the *Lastgeld*

Article 15

All issues in relation to the purchase or rent of hospital vessels, as well as the equipment of the vessels, buying of goods, engaging the captain, the officers, and the doctors, and other dispensable persons; adding the swearing them in and paying their crew for doing the same job. What else is asked, is of the members in the town to ask of their board of the hospital vessels, holding an account of 60 guilders

Article 16

Each year prior to April 15th the Kollegie is obliged to send its petition for the coming year

Article 17

The members of the Kollegie may receive a refund of nothing but transport- and board costs corresponding to the distance from their hometown and The Haag

from Enkhuizen 36,-

from van de Rijp 24,-

from Vlaardingen 9,-

from Maassluis 9,-

all receive 6,- per day for board, nothing else

Article 18

The members of the Kollegie swear in the following oath to the executive power

This I swear and promise by genuine truth, in place of the oath that I, as member of the Groote Kollegie in the Bataafsche Republiek, make an example with my utmost ability by the understanding and complying with the laws on fishing, not permitting any deviation or smallest deviance, but most accurate observance and fulfilment;- which I shall use to maintain and develop the Groote Haring visserij and its negotiations, and I relate to the articles in my instructions exactly as they are, without promises, presents, threats or otherwise, also called, deterring me, as concerns my duty

Once sworn to the executive power, the oath is announced, and pasted up wherever appropriate, for anybody to acquaint himself with the regulations.

Drawn up in The Haag, July 28, 1801, the seventh year of the Bataafsche freedom

G. J. Pijman

S. Dassevael

Source:

Nationaal Archief, Algemeen Rijksarchief, inv.686, Kollegie van der Groote Visserij, Law of 28.1.1801 p.45-50

* Vlaardingen and Maassluis did not hold seats in the former *Groote Kollegie* replaced by these Regulations in 1801

** *Ontvanger* is the title of a profession, meaning a person who receives things, here the duty *Lastgeld* from each vessel

*** The wage calculated as a % of the price made of special kinds (not species) of herring landed per vessel.

Appendix 6 note 131 and note 133 and note 561

This form is for the fishers fishing for cod using long line wanting to fish for herring as bait, midst the herring fishing season

My translation

Formulier van den Eed der Doggersvaarders, die voor den 15 July zeil gaan, door de Stuurlieden en twee hunner Bootsgezellen to doen

[Form on the oath for the mates and fishers fishing near Doggerbank before July 15th]

We swear or promise by the genuine truth, replacing the oath,

1. that we, captain and fishers do not bring onboard our vessel anymore than eight herring nets
2. that the herring we catch we only use as bait, that we do not salt any herring, big or small, in barrels or pots, or try to sell and distribute any herring whether fresh or salted, or tolerate our colleagues doing so
3. that we do not sell, exchange, give or hand over to any taxpayers in Iceland, Scotland or other foreign nations, by land or at sea, any salt, brine, barrels, *hoep*, *hoephout*, nets, *vis-* or *hoekwand*, or any other fishing gear, nor do we trade any tea, wine, spirits and *Genever* or distilled waters or do similar groceries as freight on our own account or on other's, going here or there, directly or indirectly, under which name it could be brought or tolerated that it could happen to any of our colleagues

Formulier van den Eed der Doggersvaarders, welke na den 15 July zeil gaan, door den Stuurman en twee zyner Bootsgezellen to doen

[Form on the oath for the mate and fishers fishing near Doggerbank after July 15th]

We swear or promise by the genuine truth, replacing the oath,

1. that we, captain and fishers do not bring onboard our vessel anymore than ten herring nets
2. that the herring we catch in excess of the ones used as bait is weakly salted in barrels using coarse salt
3. that we by no other means provide herring as food for mates or men or anybody else, or tolerate such as do our colleagues do
4. that we do not sell, exchange, give or hand over to any taxpayers in Iceland, Scotland or other foreign nations, by land or at sea, any salt, brine, barrels, *hoep*, *hoephout*, nets, *vis-* or *hoekwand*, or any other fishing gear, nor do we trade any tea, wine, spirits and *Genever* or distilled waters or do similar groceries as freight on our own account or on other's, going here or there, directly or indirectly, under which name it could be brought or tolerated that it could happen to any of our colleagues

Formulier van den Eed der Doggersvaarders, zo die vóór als na den 15 July zeil gaan, op hunne thuiskomst te doen

[Form on the oath for the mate and fishers fishing near Doggerbank before and after July 15th when returning]

We swear or promise by the genuine truth, replacing the oath,

1. that we, mates and fishers strictly affirm the oath we made when departing

Source:

Nationaal Archief, Algemeen Rijksarchief, inv.686, *Kollegie van der Groote Visserij*, Law of 28.1.1801 p.39-41

Appendix 7 note 147 and 523

This is an extract from the law, distinguishing between the herring fishing practised by vessels originating from the coastal towns, and the herring fishing practised at sea by vessels originating from towns up-river. Article 13-16 cover vessels fishing for cod as a sideline.

My translation

Wet van 12 Maart 1818 op de uitoefening der Groote Visscherij

[Law of March 12th 1818 on practising herring fishing near Scotland and Shetland]

.....

Concerning the different types of herring fisheries

Article 13

Groote or *pekelharing-visscherij* is the herring fishing practised during summer and autumn, near the Shetland Islands, Edinburgh and up the English coast, using vessels with a keel

Article 14

The purpose of the summer herring fishing is to catch the best herring, clean it and salt it in barrels to get a perfect export product

Article 15

Kleine or *versche haring visscherij* is the herring fishing practised in deep sea eastward off Yarmouth, using flat-bottomed vessels with no keel, from along the Dutch coast

Article 16

It is forbidden to salt these herring unless the provincial state makes an agreement otherwise with the *kollegie van de groote visscherij*

Article 17

Panharing-visscherij is the herring fishing done with or without a vessel all along the coastline of the Netherlands, no further than one hour from the coast, up rivers and streams and in inland waters

Article 18

It is forbidden to salt these herring. In case of violation, a fine of 5 *guilder* per 100 herring

Source:

Nationaal Archief 3.11.04 inv.122

Appendix 8 note 149

This oath was compulsory to first mates fishing for herring, but if first mates fishing for cod brought with them herring nets in order to catch herring as maggot for cod they must swear the oath as well.

Source:

Nationaal Archief, 3.11.04 inv.122 p.63-72, article 9 in *Wet van 12 Maart 1818 op de uitoefening der Groote Visscherij*, on the cod fishing vessels' right to bring nets for herring

My translation

First mate's oath on herring fishing near Scotland or Shetland

[*Eed voor de stuurlieden ter groote visscherij*]

I swear, or I promise by the reliable truth, replacing the oath that:

"I strictly in all aspects and at all times comply with, and at my utmost see to the compliance of my crew, to all that is mentioned in my instructions together with the laws and regulations on herring fishing drawn up and sanctioned by the government and the state of Holland, and made available to me."

Source:

Nationaal Archief, 3.11.04 inv.122, p.18 article 134 and p.16 littra C in Besluit 31.12.1822 no.40

Instructie voor de stuurlieden der schepen uit de provincie Holland ter groote visscherij varende. (Deze instructie het kort begrip van de verpligtingen der sturlieden en hunne scheepsgezellen bevattende zoo is bij elk artikel aangewezen het daarmede overeenstemmende artikel in het Reglement op de uitoefening der groote visscherij voor de provincie Holland waar zij die verpligting breeder omschreven kunnen vinden)

Appendix 9 note 159 and note 563

My translation

Reglement op de uitoefening der kleine of versch haring-visscherij voor de provincie Holland

[Regulations on practising coastal fishing in the state of Holland]

Article 1

After having obtained Royal recognition of the present regulations the members of the state parliament shall nominate a *kollegie*, called the “*Kollegie van de kleine of versch-haring-visscherij van de provincie Holland*”,* having the following object negotiated on the basis of article 15 in the law of 12 March 1818, stated in littra A hereafter**

The *kollegie*'s activities should stretch out to include the *panharing* fishing and the coastal fishing embracing all different species kept fresh, except herring

Article 2

The *kollegie* consists of 8 members, nominated among the most wealthy, influential, dignitary citizens and composed by the interested parties' majority of votes so that:

Scheveningen has 2 members

Katwijk aan Zee has 2 members

Noordwijk aan Zee has 1 member

Zaandvoort has 1 member

Egmond aan Zee has 1 member

Wijk aan Zee has 1 member***

Similar interested parties in Zuiderzee may nominate 1-2 members and send an application to the members of the state parliament in Holland to join the *kollegie*

Members of the state parliament in Holland nominate the first members of the *kollegie*.

Whenever a vacant position hereafter, the *kollegie* writes the ship owners concerned asking for a nomination of a candidate for the vacancie

Article 3

Coastal fishing is only allowed when permitted by the *kollegie*, or punishment according to article 12 in law of 12 March 1818 Staatsblad no.15

This permission is refused at nobody but the case grounded on legal conditions

In case of refusal the state deputies must investigate and make a statement

Article 4

To sustain, the *kollegie* must annually hand in an *akte van consent* with the year, the signature of the president and the secretary of the *kollegie* and its seal.

Article 5

The *akte van consent* [statement of consent] is handed in only after the swearing-in of the first mates and able seamen in coastal fishing, stated in littra B hereafter*****

Article 6

Within a month after the erection of the *kollegie* it must ensure the publishing a copy of the regulations along with copies of the law of 12th March 1818, including the oath in article 5, for all the first mates on vessels practising coastal fishing to obtain a copy, for free

Article 7

The first mates having received the *akte van consent* may not go fishing for fresh herring before September 14th nor after December 31st

In case of violation, the first mate and the ship owner will be punished independently by 7 days imprisonment and a fine of 50 guilders each

Article 8

If returning home, the first mate is allowed to hand over his catch of herring to another first mate at sea

When fishing for fresh herring, the first mate and the able seamen are not allowed to salt or otherwise treat any of the herring caught, whether kept as a whole or cut into pieces, in order to sell directly or indirectly.

In case of violation, the first mate and the ship owner will be punished by 1 month's imprisonment; the able seamen by fines of 5 guilders to every 100 herring according to articles 16 and 18 in the law of 12th March 1818

Article 9

The first mate keeps each night's catch separate and explain each lot's date of catch, if necessary

In case of violation, a punishment of 50 guilders

Article 10

All vessels fishing for fresh herring must work cautiously with credibility, accuracy and attention, avoiding any unlawful activities

In case of violation, bring the law-breaker to the police

For further consideration, article 21-22 in the law of 12th March 1818 forbids first mates and crew from arriving at port in foreign countries, unless in utmost need

Article 11

It is forbidden for the first mates or able seamen to bribe the purchasers of fresh herring

Article 12

It is likewise forbidden for the first mates and able seamen to sell fresh herring newly landed on the beach as anything but fresh herring

Article 13

The fresh herring for sale must be counted by a person, *teller*, authorized by the local community to count herring specifically

Article 14

Fresh herring vessels must pay *lastgeld* [tax] on their catch at a rate where 12.000 fresh herring equal 14 barrels of *pekelharing* [salted herring]****

Tellers must confirm the numbers of herring. An *ontvanger* [official recipient], employed by the kollegie in accordance with article 10 in *Instructie voor de Kommissarissen ter directie*

der zaken van de versch Haringvisscherij in de provincie Holland,***** collects the numbers and provides the *kollegie* with a written document ready for making the calculations for the *lastgeld* to be paid

Article 15

After the teller's confirmation, the first mate and 2 of his able seamen must make the end-of-season swearing-in, see littra C hereafter*****

Article 16

The *kollegie* or its president and secretary manage the swearing-in, and they keep a record according to the law and regulation

Article 17

The bailiff and the police officer in the coastal villages enforce this regulation, and at the request of the ship owners and bookkeepers, they examine the discharge and send the policeman's report to the public prosecutor in the district

Article 18

In case of violation of any paragraph in these regulations not mentioning any punishment, article 3 in law of 12th March 1818 staatsblad no.12 come into force charging at the most a fine of 25 guilders and 7 days imprisonment, as one sentence or either at a time

The regulation is sanctioned on December 31st 1822 by
the *Staatsraad*

the Minister of Public Education, Industry and the Colonies

the *Griffier der Staten van Holland* [Secretary of Justice in the province of Holland]

Source:

Nationaal Archief, 3.11.04 inv.122 p.34-37, 52-56 permitted by *Koninklijk besluit van 31.12.1822 no. 40 and p.151-192 Verzameling van Wetten, Reglementen en Besluiten betreffende de kleine of kustvisscherij van de provincie Zuid- en Noord-Holland August 1st 1845 and p.227-239 Reglement op de uitoefening der Kleine of Versch-haring- en Kust-Visscherijen, in de provincie Zuid-Holland 22.08.1848 no.36 and Algemeen Archief depot, inv.686*

* The name of the *kollegie* was changed by Royal provision of January 29th 1826 to “Kollegie van de kleine of kustvisscherij der provincie Holland” and changed again by provision of September 4th 1840 no.48 to “Kollegie van de kleine of kustvisscherij der Provincien Zuid- en Noord-Holland”. It was also changed by provision on August 8th 1848 no.36 to “Kollegie van toezigt en bestuur voor kleine of versch-haring- en kustvisscherij in de provincien Zuid- en Noord-Holland”

** **Littra A** is equivalent to the *Instructie voor de Kommissarissen ter directie der zaken van de versch Haringvisscherij in de provincie Holland*

3.11.04 inv.122 p.57-62

*** The towns Middelharnis, Zwartewaal and Pernis were allowed a member each of the *kollegie* by Royal provision of July 4th 1827 no.146, yet this was just mentioned in a footnote. In 1848, these 3 towns were now fully recognized members of the Kollegie, whereas Zandvoort, Egmond aan Zee and Wijk aan Zee figured in the footnote; royal provision of 08.08.1848 no.36.

**** The tax was 3 guilder per 12.000 herring or 14 barrels of pekelharing according to law of 28.07.1801, article 99; yet it was reduced to 1 guilder by the resolution of January 29th 1826 and resolution of December 25th 1840 no.28, announced by the members of the state parliament on January 5th 1841 no.6

***** **Littra B** and **Littra C** are from provision of November 26th 1839 no.101, equivalent to the First mate's oaths presented below as part of **Littra A**

***** **Article 10**

“The *kollegie* must appoint the *ontvanger* and set his salary in approval with the members of the state parliament. The *ontvanger* must find sufficient bail”

3.11.04 inv.122 p.57-62

Appendix 10 note 159 and note 563

My translation

Instructie voor de Kommissarissen ter Directie der zaken van de versch Haringvisscherij in de provincie Holland (Littra A)

[Instructions for the commissioners managing the coastal fishing in the state Holland]

Article 1

The survey and promotion of the interest in fresh herring fishing is commissioned to a *kollegie* of commissioners entitled “*Kollegie van de versch Haringvisscherij van de Provincie Holland*”

The *kollegie* must cooperate with the state deputies of southern and northern Holland, while supervised by the ministry of public education, industry and colonies

Article 2

The *kollegie* work according to the law of 12th March 1818 staatsblad no.15 on the *groote visscherij* [salted herring fishing] and according to the regulations mentioned previously [Regulations on practising coastal fishing in the state of Holland] making sure the instructions are known to ship owners, bookkeepers and fishers

Article 3

The *kollegie* provides the state deputies with appropriate statutory instruments and decisions concerning the coastal fishing to serve the interest of the profession; in particular in relation to the above mentioned article 1 and regulations, the *kollegie* recommends necessary decisions on the time spent practising coastal fishing using *beugline* as well as *schrobnet* and *garnalenkord*, the width, depth and other criteria of the nets and classifications regarding herring fishing [*panharing*].

Article 4

The [first] president of the *kollegie* is elected for a 5 year period by the members of the *kollegie* by the majority of votes

This presidency may end owing to bereavement or different circumstances; the members then reiterate the election of president, yet this election period and the forthcoming election periods last 3 years. Reelection is possible.

Each year, the members of the *kollegie* elect a vice-president acting as a deputy for the president when necessary

The members of the state parliament elect the first president. The president calls the general meeting, the secretary takes the minutes and initiate discussions with the members on the benefits of fishing within the set law and regulation

Article 5

The first annual meeting in the *kollegie* is held during the last week of April each year, deciding the topics to be discussed at the next meeting [the *kollegie* meets twice a year]

Article 6

Before planning the schedule of the first meeting the members must ask themselves if they are to inform and invite any ship owners or bookkeepers for the meeting

Article 7

The second annual meeting in the *kollegie* is held during the first week of August each year putting on the agenda the following points:

- Considering the topics discussed and assigned at the meeting in April
- Settle the accounts and in order to present it to the state deputies

There need to be a time interval for the members of the state parliament to make an announcement of the accounts in the paper

Article 8

The *kollegie* engages a secretary and other employees in accordance with the regulation of the *kollegie* and the members of the state parliament's acceptance. The employees enjoy an annual wage corresponding to the work done

Article 9

The *kollegie* holds its meetings in Katwijk aan den Rijn

Article 10

The *kollegie* nominates the *Ontvangers* [official recipient] of *lastgeld* [tax] and set their wage in cooperation with the members of the state parliament. The *Ontvangers* may find bail to please the *kollegie*

Article 11

The *kollegie* receives no fixed salary. In case of additional costs in relation to participating in the meetings of interest to the fresh herring fishing, compensation is paid of the travelling expenses at 3 guilder per 1 hour's transport.* Any additional costs of travelling is compensated by 8 guilder, except for the expenses on the day of departure

Article 12

The *kollegie* must provide the members of the state parliament with the budget of the coming year, well in advance of the general annual meeting in August

Article 13

At the beginning of their service, the members of the *kollegie* must swear to the members of the state parliament that

“I swear, or I promise by the reliable truth, replacing the oath that:

as member of the *Kollegie van de versch haring visscherij van de provincie Holland* I enforce the law on fishing, and the regulation on herring fishing in the province of Holland, and with all my ability I enforce and support, without permitting any relaxation, but on the contrary that the laws and regulations carefully are complied with; moreover I use all means promoting the fishing, and go far in negotiations, particularly in the province Holland. Finally, I continue following the articles in the regulation or any promise made to the superior” [the king, the minister or the members of the state parliament]

Littra B

[see First mate's oath on coastal fishing (beginning of season) next page]

Littra C

[see First mate's oath on coastal fishing (end of season) next page]

The regulation is sanctioned on December 31st 1822 by
the *Staatsraad*
the Minister of Public Education, Industry and the Colonies
the *Griffier der Staten van Holland* [Secretary of Justice in the state of Holland]

Source:

Nationaal Archief, 3.11.04 inv.122 p.38-41, 57-62 permitted by *Koninklijk besluit van*
31.12.1822 no. 40 and p.151-192 *Verzameling van Wetten, Reglementen en Besluiten*
betreffende de kleine of kustvisserij van de provincie Zuid- en Noord-Holland August
1st 1845

* The compensation paid of the travelling expenses was reduced by Royal provision on
January 27th 1843 no.54 to 2 guilders per hour travelled, and communicated by the
members of the stat department on February 7th 1843 no.1

Appendix 11 note 159

In 1822, the prohibition against trade while fishing was part of the general regulation on fishing. In 1839, it had become part of each fisher's promise on good behaviour at sea.

My translation

First mate's oath on coastal fishing (Littra B)

[beginning of season (no formal title)]

I swear, or I promise by the reliable truth, replacing the oath that

- as first mate on a vessel fishing for herring before the 20th September or after the 31st December, I draw no nets to catch herring nor tolerate the activity of any crew members
- as first mate I do not salt or otherwise treat any of the herring caught, whether kept as a whole or cut into pieces, in order to sell directly or indirectly, nor do I tolerate the activity of any crew members.
- as first mate I keep each day's catch separate assuring any other crew member's duplicate
- as first mate I may explain each lot's date of catch, if necessary
- as first mate I do no mercantile business of any kind or goods like net, salt, brine, barrels, cod, twine, hooks, cordage, tea, wine, spirits, genever and distilled water with citizens from Shetland or Scotland nor do any of the crew members at their own expense, here or there, directly or indirectly

First mate's oath on coastal fishing (Littra C)

[end of season (no formal title)]

I swear, or I explain by the reliable truth, replacing the oath that

- as first mate on a vessel fishing for herring I have kept my promise of departure in all aspects as has any member of the crew

Source:

Nationaal Archief, Kollegie voor de Kleine of Kust Visserij, 3.11.04 inv.122 p.29-31 article 5 and article 15 in "Koninklijk besluit van den 26.11.1839 no.101 houdende wijziging van het bestaande reglement op de kleine of kust visscherij voor de Provincie Holland"

Appendix 12 note 160 and note 560 and note 565

This *Notificatie* shows the effect of the inclusion of the fishers from Pernis, Zwartewaal and Middelharnis moving from sea fishing to coastal fishing, formally having their engagement recognized in the *Kleine Kollegie* in 1825 – I refer to the debate in the text – by changing the regulation to the *Kollegie van de Kleine of Kust Visscherij* originating in 1822
The *Kleine Kollegie* uses this *Notificatie* as a key to information to the coastal fishers

My translation

Notificatie

[Notification]

The subsequent regulation provisions amplifying the, by the *Koninklijk besluit van 31.12.1822 no.40* re-sanctioned regulation on practising coastal fishing

Article 1

This summary and promotion of the provisions on coastal fishing, using *schrobnet* as well as *beug*- or *hoekwant*, is just like the fresh herring fishing dedicated the *kollegie*, and according to the *Koninklijk besluit van 31.12.1822 no.40* named *Kollegie van de kleine of kustvisscherij der provincie Holland*

Article 2

Every ship owner, administrator or person equipping the fishing vessel due for *beug* or *hoekwant* fishing must in accordance with *Koninklijk besluit van 25.11.1825 no.75* each year prior to November 1st make a written assignment to the *kollegie* confirming the intention of fishing, and the name of the vessel and the first mate

Article 3

The *kollegie* must accordingly provide an annual, written certificate of coastal fishing using *beug* or *hoekwant*, holding the year and the *kollegie*'s seal, approved by the president and the secretary

Article 4

Every year, within 14 days after the end of fishing season, the ship owner, administrator or the person equipping the fishing vessel participating in coastal fishing must confirm that the sworn-in oath to the local government representatives was respected when practising *beug* or *hoekwant* fishing. He must confirm the vessel's date starting and ending fishing season, and if the vessel has been fully occupied with fishing during season, using correct gear as prescribed in the following provisions; see article 7

Article 5

The *kollegie* must examine the prescribed explanations, and compare to see if they match the formal recognition and then send the explanations, including the names of the ship owner, the vessel and the first mate, to the members of the state parliament for approval or refusal of the financial support. Only the vessels fully meeting the criteria set by the *Koninklijk besluit van 25.11.1825 no.75* and connected provisions receives full support of 250 guilders.*

Article 6

The vessels receiving financial support must be fully covered, their length be of no less than 7 Dutch *ellen*** and 6 *palmen***, and their width of no less than 4 Dutch *ellen* and 5 *palmen* at the interior; length at the stem and depth at ratio

Article 7

The *beug* fishing vessel must for each trip bring with it no less than 30 sticks with flag, cork and lines attached to each of them making all together about 200 fathoms or at least the length of 330 Dutch *ellen*; providing no less than 180 good, sharp, tinned hooks on each line

Article 8

The *kollegie* has to all times had the right to examine if any vessel equipped for *beug*- or *hoekwant* fishing does so according to the prescribed provisions and thereby is allowed continuation and finally if this certifies allocation of financial support. In case a vessel has a loss of fishing gear at sea, the *kollegie* should be notified to observe the retrieval of any [?]

Article 9

In case of loss of vessel, the first mate of the vessel must, immediately at his return, announce the loss to the *kollegie*, and in case the vessel has not returned within 8 days or shown within 14 days, it may be replaced

Article 10

The fishers are obliged presenting to the *kollegie* their sending off vessels fishing and carefully reporting their return, if not they may be detained. However, in case each ship owner experiences certain ticks sticking to his vessel, they are easily recognizable [saying?]

Article 11

If the fishers neglect their obligations when returning from fishing, the value of the detained is treated as theft and fined according to existing law

Article 12

Whenever the fishers drag their vessel onshore they ought not to hinder other vessels' usage. In case of damage to others when doing so, a fine of 25 guilder for repair

Article 13

No other vessels, but those examined, registered and marked by the inspector according to article 6 in *Koninklijk besluit van 25.11.1825 no.75* may practise coastal fishing
In case of violation, a fine of 25 guilders and 3 days imprisonment is given; the penalty is 3-doubled in case the violation includes article 2, 3 and 4 of the law as well

Article 14

If the supposed inspector's marks on fishing gear appears to be deliberate and accurate fakes and thereby used wrongly, invalidating the useful *Koninklijk besluit van 25.11.1825 no.75*, the person violating the law is fined 75 guilders, notwithstanding the penalty of other laws

Article 15

The vessels practising fresh fish fishing must always allow the inspector to freely examine their vessel and assist if needed

In case of resistance or violation the fishers are fined according to article 8 in *Koninklijk besluit van 25.11.1825 no.75*, or if in case of insult or abuse, according to existing law

Article 16

The fishers are asked to ensure their vessel comply with the provisions of the *Koninklijk besluit van 25.11.1825 no.75*

Article 17

All fines and penalties (except those concerning insult and abuse) must be imposed on the first mate, the skipper or the captain, as he is regarded responsible for his employees, except if evidence says someone acted against his order or against his knowledge

Katwijk aan den Rijn, January 18th 1826

marked [with the *Kollegie's* seal, I think] by the president of the *Kollegie* G Hoogenraad
marked [with the *Kollegie's* seal, I think] by the secretary to the *Kollegie* Hummel

Source:

Nationaal Archief, 3.11.04 inv.122 p.48-51

The members of the state parliament in Holland amplify the *Koninklijk besluit van 31.12.1822 no.40* in the *Koninklijk besluit van 25.11.1825 no.75* on coastal fishing and inspectors and *Missive van 13.03.1826 no.26*

3.11.04 inv.122 p.172-176 *Notificatie* which is part of p.151-192 *Verzameling van Wetten, Reglementen en Besluiten betreffende de kleine of kustvisserij van de provincie Zuid- en Noord-Holland 1845*

*The payment concerning Scheveningen, Katwijk and Noordwijk was changed by resolution of November 6th 1840 no.71

** $e/ = 1 \text{ m}$

**** *palm* = 1 dm**

Appendix 13 note 214 and note 560 and note 563

My translation

Home Regulations concerning the representatives of the Iceland and [North Sea] cod fishery from the Province of Southern Holland.

Article 1.

The committee of the Iceland and [North Sea] cod fishery in Southern Holland must consist of five members

one member from the town of Vlaardingen

one member from the town of Maassluis

one member from the town of Zwartewaal

one member from the town of Middelharnis

one member from the town of Pernis

Article 2.

The member from Vlaardingen must always hold the position as president of the committee.

Article 3.

The committee selects a secretary on a fixed annual pay of fifty guilder.

Article 4.

cancelled

Article 5.

When a vacancy within the committee arise, the committee must notify the head of the local community of the end of its representation

Article 6.

The deputies of the Province of Southern Holland make the appointment of a new member of the committee based on a nomination made by the determinative local ship owners' majority in several successive elections.

The elections must be chaired by the president of the local bookkeepers; if not available then the head of the local community.

Article 7.

The committee supervises proper exertion of fishing carefully. Intervention occurs, when needed, by corresponding with the government or other authorities. The committee receives and controls the ship owners' applications for financial support and draw up the report form the government based on the applications.

Article 8.

[Each year] the members of the committee must consider how the ship owners by time and means follow their trade, according to agreement with the government. The committee makes a summary of the course and result of the cod fishery.

Article 9.

Each year in April, the committee holds a general assembly, preferably in Vlaardingen or in Maassluis, to consider and assess the received statements in order to make the summary mentioned in article 8. Under certain circumstances, the president may call an extraordinary general assembly.

Article 10.

The committee is authorized to achieving four guilders per vessel gaining financial support from its Iceland- or [North Sea] cod fishery, compensating the committee members their travel costs, the secretary his pay, plus postage and gratuity costs, according to an estimate made by the deputies in the province, apart from which no reimbursement will be made.

Article 11.

Each year in October, the secretary presents an account for each ship owner, settling with him individually.

Thus after approval by the deputies in the province of Southern Holland
follow suit in Vlaardingen, 1847

Jan de Willigen, president and P. Kikkert, secretary

Source: Nationaal Archief 3.11.05 inv.34 p.943-951

Appendix 14 note 243

My translation

Instructie regelende de werkzaamheden van het College voor de zeevisscherijen

[Instructions appointing the operations of the *College* of seafishing]

Article 1

The domicile of the *College* is The Hague

Article 2

The president is appointed by the minister of the interior in cooperation with the *College*, and is chosen after two elections [?]

Article 3

The *College* appoints a secretary who is chosen in two elections. If the appointed is a member of the *College* he ceases to be so. The secretary is appointed for three years and may be reappointed

Article 4

Once the first nomination of members for the *College* is made, the resignation is made in preset order. The first resignation takes place on June 1st 1858. To follow the schedule made, a new member is nominated, and the member whose chair is now taken by a new member, resigns*

Article 5

The *College* meets at least once a year, and as often as the president thinks necessary, or as three members, having an issue of concern, make a written inquiry for the *College* to meet. The meeting is arranged by the chairman. The *College* lays down its regulations to

be sanctioned by the minister of the interior, while later it needs some changes and additions to it

Article 6

The chairman may ask the *College* to meet elsewhere but The Hague, and also for one or more members to do research outside of their own community

Article 7

The *College* may set up a committee among its members or instruct its members to engage with certain businesses as long as it does not collide with the law on the *College*

Article 8

The *College* is in correspondence with the ministry of interior. Whenever information is needed or messages must be given, the *College* uses its connections with other *Colleges*. When making a haringkaart [map on fishing grounds for herring?], the *College* makes contact with the *Koninklijk Nederlandsch Meteorologisch Instituut*

Article 9

The *College* supervises the *Keurmeesters*. The *College* is authorized to adjourn the work of the *Keurmeester* by six weeks at the most; if approved by the ministry of the interior it is authorized to dismiss the *Keurmeester*

Article 10

When the *College* receives complaints on the *keuring* [control] of the herring vessels it must consider the complaints and answer in a forthcoming way

Article 11

Each year before May, the *College* sends an elaborate, well thought out report on its own operations and the state of sea fishing in the precedent year. It also sends its annual accounts on the administration costs and a budget for the coming year

The *Instructie* is sanctioned on November 30th 1857, no.33

by the king and the minister of the interior A. G. A. van Rappard

Source:

Nationaal Archief: *Kollegie van de Kleine of Kust Visserij*, 3.11.04 inv.122 p.219-220

* Contrary to the members of the *Kollegien* existing prior to 1854, the members of this *College* are no longer nominated because they are ship owners. They are representatives of the maritime business in one way or the other, and therefore each seat in the *College* represents a profession or a topic in relation to fishing. Replacing of members reflects this, instead of i.e. their geographical origin.

In 1868 the *College* extended from 9 to 15 members

Source:

Verslag van de Staat der Nederlandsche Zeevisserijen

Appendix 15 note 499

My own translation:

Concept Reglement Voor de Nederlandsche Scheeps- Leerlingen bestemd tot aankweeking van Nationaal Zeevolk

[Draft of the regulation for the Dutch apprentices training to become national seamen]

Article 1

The definition of apprentices training for seamen is young men at the age of twelve to sixteen, born in the Netherlands under civil law [burgerlijke wet]

Article 2

All vessels, except for the following vessels sailing under Dutch flag, must bring an apprentice on each journey

Article 3

The river borne traffic, traffic in the inland waters if without “gaats”, pilots, coastal fisheries, and sea fisheries employing five seamen or less are omitted from the rules of article 2

Article 4

The number of apprentices per vessel must be:

Vessels holding a crew of 6-10 seamen apply one apprentice

Vessels holding a crew of 11-16 seamen apply two apprentices

Vessels holding a crew of 17-25 seamen apply three apprentices

Vessels holding a crew of 26-34 seamen apply four apprentices

For a crew size bigger than 34, the vessels applies one apprentice to every new crew member

Article 5

Vessels going to Greenland and the David Strait are omitted from the rules of article 4

Article 6

Vessels fishing for herring having crew members younger than twenty years of age must at least, as exception to article 4, be born in the Netherlands

Article 7

The public servant cannot let any vessel holding incorrect number of apprentices sign on

Article 8

The ship owners are obliged to find the prescribed apprentices. In case of difficulties, the ship owners may contact the commandant and the director in the department of the marine

Article 9

The public servants in charge of the national guard ships prepare a message and an authorization for the commandant and the director in the department of the marine enabling many young men to engage with the ship owners if they like to, cf. article 1, and overcome the shortage of seamen

Article 10

Among the young men volunteering for apprentice, few are chosen and considered stationed, while at sea. Returning home, they finish their apprenticeship in the marine

Article 11

The ship owner must pay the equipment for the apprentice, his travel costs to the port of departure, and the necessities while at sea

Article 12

The ship owner engages the apprentice for three years, if necessary prolonged

Article 13

During his apprenticeship, the apprentice must be available for the ship owner to do any work assigned on the vessel while at sea or in port

Article 14

The ship owner must supply the apprentice with accommodation, maintenance, and boarding. In case the apprentice stays in the company after his apprenticeship, he is entitled to a pay that either part finds reasonable and that is consistent with civil law (landswetten) and the regulation for signing on

Article 15

A written agreement, holding the parents' consent, regulates the service of the apprentice. Either the commandant in the department of the marine or the public servant in the port takes on the apprentice. In either case, two identical documents are drawn up, one for the parents and one for the ship owner

Article 16

These obligations cease when:

A ship owner dissolves his business

A ship owner does not sign on his apprentice at the end of apprenticeship or within six months

An apprentice is considered inadequate for navigation or he has misbehaved

Article 17

In case a vessel is immovable the commandant must be notified

Article 18

The ship owner must pay the costs of having an apprentice at a guard ship

Article 19

In case the parents pay the boarding of the apprentice during his apprenticeship, he cannot be transferred to a guard ship when marine vessels are in port

source: Nationaal Archief den Haag 3.11.05 inv.14 p.307-313