

The History of Ireland's Marine Fisheries, 1500 to 1603

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Declaration

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Summary

This thesis illuminates the history of Ireland's marine fisheries from 1500 to 1603 through a range of digital research methods. Previous monographs on the history of Irish fisheries have been unfocused and anecdotal. This thesis has taken a far more systematic and concentrated approach to the study of fisheries. This work has also combined literature from the fields of archaeology, ecology, and consumption history to better understand the trajectory of fisheries and their significance to the economic, political, and environmental history of Ireland.

Two central relational databases were used to store and analyse primary source material in this work. The Qualitative Fishing Database (QFD) stores qualitative information from sources like the Irish State Papers and records of the English High Court of the Admiralty. Data derived from the qualitative sources illustrates that Ireland played host to a diverse range of fishing operations around the year 1500. In that period, English, Spanish, and French fishers regularly visited Ireland, and certain regions along the Irish coast developed complex systems to accommodate and tax these fisheries. Specific Gaelic Irish families profited from this activity and developed their economies around the visiting fishing fleets. Old English towns, such as Dublin, Waterford, Wexford, Cork, among others, also had active fishing fleets that operated locally and travelled to other parts of the Irish coast in search of catches. A wide range of fishing methods, as well as intricate commercial and financial systems based across Europe, supported these fisheries. Quantitative data from assorted English and Welsh port books and customs accounts were combined in the Fishing Trade Database (FTD) to understand the fluctuations in Ireland's sixteenth-century fish trade. This quantitative data demonstrates that fish was Ireland's premier export commodity in the late fifteenth and early sixteenth centuries. However, the industry suffered a severe decline by the end of the sixteenth century, and fish never regained the same level of importance in Ireland's international trade.

This thesis also explores the combination of contributing factors for the change and decline of Ireland's fisheries during the study period. Conflicts related to the Tudor re-conquest of Ireland had a direct impact on Irish fisheries through damaging and disrupting operations. Furthermore, by 1603, English colonialism had fundamentally altered the access and ownership of fishing resources, as well as ended the relationship between Ireland and foreign fishing fleets that had flourished at the beginning of the century. This thesis further places Ireland within the broader history of fisheries in the North Atlantic, showing that foreign fisheries in Ireland were a precursor to European fishing operations in Newfoundland later in the sixteenth century. Additionally, the influx of cheap cod from Newfoundland directly impacted Irish consumption patterns and contributed to the decline of its domestic fisheries.

Finally, this thesis illustrates that people in the sixteenth century were aware of the fragility of aquatic ecosystems and had the potential to damage the sustainability of fisheries on which they depended. Additionally, favourable climate and ocean conditions likely aided the expansion of Irish fisheries in the mid-fifteenth century, while contrasting poor conditions contributed to the industry's collapse in the later sixteenth century. Ultimately, this study reveals that the importance of early modern fisheries in Ireland has previously been seriously underestimated as regards trade and domestic consumption and that the politics of the period need to be viewed in light of the fisheries' wider economic importance.

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Abbreviations

TNA	The National Archives (London)
TLW	Tonnes Live Weight
QFD	Qualitative Fishing Database
QFD ID	Qualitative Fishing Database Identification Number
FTD	Fish Trade Database
OCR	Optical Character Recognition
QDA	Qualitative Data Analysis
FAO	Food and Agriculture Organisation of the United Nations
SP	State Papers, National Archives London, (MSS)
Cal. Car. MSS	Calendar of Carew Manuscripts
C.S.P. Ire	Calendar of State Papers relating to Ireland
HCA	The High Court of the Admiralty
EU	European Union
ICES	International Council for the Exploration of the Seas

Introduction

“All the joy of my heart is the herring that never was taken upon his bait.”

Christopher St Lawrence, *The Book of Howth*, compiled between 1567-71.¹

Historians have not given the study of Irish fisheries history due consideration. In some respects, this is confounding; Ireland is an island, and like all islands, it has a deep connection and relationship with the seas and oceans surrounding it. Water has visibly and dramatically shaped Ireland physically and culturally for its entire history, and now more than ever, it is essential to understand our past interactions with aquatic environments. The planet's seas, oceans and rivers are under immense pressure and facing threats that imperil ecosystems and, in turn, human societies. It was people who caused this environmental crisis; therefore, historians and humanities scholars are uniquely positioned to help shape a human solution to the problems facing us. Ultimately, we cannot adequately tackle these challenges without understanding how people in the past interacted with and influenced the natural world.

This thesis seeks to help rectify this situation by studying in detail the history of Ireland's fisheries in the sixteenth century. The core aim of this work is to take an interdisciplinary approach and apply new and innovative digital methods to the study of Irish fisheries. These digital methods allow us to move beyond mere anecdote and establish a firmer quantitative basis in the study of Ireland's fisheries. The methods and the sources applied in this study will be outlined in the following chapter. Ultimately, the current study seeks to establish the basic facts concerning Ireland's fisheries, most of which have been unknown to us. Questions such as where fishing took place, who conducted it, what species were targeted and what methods were used. It additionally strives to establish the scale and economic significance of fisheries in sixteenth-century Ireland.

Furthermore, one of this work's key objectives is to establish a baseline for the state of fisheries around the year 1500 and then trace how the industry changed over the century. It will further aim to understand the key factors that caused fisheries to change over time. Major factors

¹ J. S. Brewer and William Bullen, *Cal. Car. MSS - Misc Docs - Vol 6 - Book of Howth* (London: Longman & Co., 1871). For a full exploration of the Book of Howth see, Valerie McGowan-Doyle, *The Book of Howth : the Elizabethan re-conquest of Ireland and the old English* (Valerie McGowan-Doyle, 2011).

considered here include the influence of war and piracy, changing consumption patterns, the rise of the Newfoundland cod fishery and environmental change and degradation. This work further attempts to establish how these factors led to change and how they interacted with each other to transform fisheries in Ireland. The final part of this introduction will outline what topics each chapter will cover, but first, we will review what has been written previously about the history of Irish fisheries and explore more recent research that has begun to reverse the trend of neglect that this subject has been subject to. A wide range of other literature that inspired and influenced this work will also be explored.

The current thesis also forms part of a larger ERC funded project, The North Atlantic Fish Revolution an Environmental History of the North Atlantic 1400-1700 (NorFish).² The core aim of the NorFish project is to examine the economic, social, and cultural impact of the Newfoundland cod fishery on the North Atlantic. The project employed a multidisciplinary team of historians, archaeologists, marine scientists, statisticians, and researchers from a host of other disciplines to address its core questions.³ This thesis aims to apply the same multidisciplinary approach to Irish fisheries, drawing on the latest literature from history, archaeology, and marine science.

The NorFish project also builds on research from marine environmental history, itself a subfield of environmental history. Both disciplines have grown considerably over the last 25 years and led to a new understanding of the changing relationship between human societies and the natural environment.⁴ The marine environmental history field invites us to marry both history and marine science to understand the longer-term human impact on aquatic environments. In 1995, the French marine biologist Daniel Pauly wrote about a phenomenon he coined 'shifting baseline syndrome', which contends that current fisheries quotas are flawed because scientists determine these based on ocean systems that have already been degraded from their original state.⁵ Pauly argued that each new generation of scientists sets new targets based on evidence from their lifetime and do not take the longer-term history of those systems into account. Pauly's work invites us as historians to help understand and illuminate this longer-term history of aquatic ecosystems.

² "The North Atlantic Fish Revolution An Environmental History of the North Atlantic 1400-1700 (NorFish) European Research Council Advanced Grant (2016-2020), NorFish, ERC-2014-ADG." (Trinity Centre for Environmental Humanities, 2016-2020) <http://cehresearch.org/norfish.html>.

³ Poul Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)", *Quaternary Research*. (2019)

⁴ Bo Poulsen, "Marine Environmental History", in *World Environmental History*, ed. Mauro Agnoletti, Elisabeth Johann, and Simone Neri Serneri (Oxford: EOLSS Publishers, 2012), p. 1.

⁵ D. Pauly, "Anecdotes and the Shifting Baseline Syndrome of Fisheries ", *Trends in Ecology and Evolution* 10 (1995).

In his 2013 publication, W. Jeffrey Bolster makes a case for the study of marine environmental history. Bolster argues that the oceans were viewed as timeless, enteral and 'separate from nature throughout European history.⁶ In turn, this psychological separation has led scholars to disregard the oceans and their impact on history. However, in recent times, the human impact on the oceans has become apparent, leading us to explore the longer-term history of human interference and exploitation. Bolster provides ample examples of studies that have addressed this longer-term exploitation and shown the benefit of combining historical and scientific approaches. Ultimately Bolster argues that marine environmental history has the potential to answer questions and provide valuable perspectives that can help turn the tide and overcome the problems we are facing today.⁷

One of the first large-scale projects that sought to reconstruct ocean conditions in the past was the History of Marine Animals Population (HMAP), which ran from 2000-2010.⁸ The HMAP project demonstrated that natural scientists and historians could work together to reach shared research goals and answer questions that either discipline could not tackle in isolation. The current study builds on that legacy by trying as much as possible to view historical information through the lens of modern ecology. Doing so can allow us to understand patterns and trends that emerge in the historical record.

While the study of Irish fisheries has not received the attention it deserves, some historians have broached the topic in their work. One of the most prolific writers on the history of Irish fisheries was Arthur E. J. Went, who was an active researcher from the 1940s to 1970s. In many ways Went was ahead of his time; he was a marine biologist who served as president of the International Council of the Exploration of the Seas (ICES) from 1966 to 1969, and he also wrote extensively on the history of Irish fisheries.⁹ Went authored close to 30 articles on Irish fisheries history, many of which were original studies using evidence other historians had overlooked.¹⁰ The ecology and history of salmon (*Salmo salar*)¹¹ was a particular interest of Wents, and he published several articles on the history of salmon rivers in Ireland which proved

⁶ Jeffrey Bolster, W., "Opportunities in Marine Environmental History", in *Global Environmental History, An Introductory Reader*, ed. J. R. McNeill and Alan Roe (London: Routledge, 2013), p. 58.

⁷ Ibid., p. 73.

⁸ The HMAP project formed part of the more extensive Census of Marine Life research initiative, Poul Holm et al., "Marine Animal Populations. A New Look Back in Time", in *Life in the World's Oceans: Diversity, Distribution, and Abundance*, ed. A. D. MacIntyre (Oxford: Blackwell, 2010).

⁹ Christopher Moriarty, "Arthur E. J. Went, 1910-1980", *The Irish Naturalists' Journal* 20 (1981).

¹⁰ A full list can be found in the bibliography and this article also lists works by Went between 1940-1974, A. E. J. Went, "List of Some Historical Papers etc on Irish Fish, Fishing and Fisheries 1940-1974", *Department of Fisheries and Forestry Fishing Leaflet* 97 (1978).

¹¹ "Salmo salar (Linnaeus, 1758) Atlantic salmon." (Fishbase.org, 2020)
<https://www.fishbase.se/summary/salmo-salar.html>.

valuable to the current study.¹² Despite Went's background, he rarely combined historical and biological themes in his work, which is not surprising in some ways, as the field of marine environmental history had yet to emerge in Went's lifetime. Despite this, Went's many publications provide a wealth of detail about local fisheries in Ireland and inform many parts of the current study.

Troubled Waters: A Social and Cultural History of Ireland's Sea Fisheries by Jim Mac Laughlin is the most recent monograph on Ireland's fisheries history.¹³ Mac Laughlin writes that in modern times Irish governments have neglected to invest in indigenous fisheries and this neglect has been mirrored in the interests of Irish historians and social commentators.¹⁴ The first several chapters of Mac Laughlin's work covers Ireland's fisheries in the medieval and early modern period, but unfortunately, the work adds little value overall to the subject of fisheries history. Mac Laughlin's treatment of the subject is haphazard, with no overarching structure or questions posed. Furthermore, Mac Laughlin does not systematically approach the historical evidence, with the text jumping between centuries in every paragraph.¹⁵ Mac Laughlin's work is essentially a collection of anecdotes about fisheries, some of which contain useful details, but do not add up to a cohesive study.

The other monograph written on Irish fisheries was written by John de Courcy Ireland and published in 1981.¹⁶ de Courcy's book, *Ireland's Sea Fisheries: A History*, contains many interesting details but is not a thorough academic study. Some sections are well supported by evidence and primary research, but other parts of the text are not, something made worse by the lack of references. de Courcy also frames his work from a nationalist perspective, pitting indigenous Irish fishers against the 'foreigners' who exploited them for profit.¹⁷ As we shall see later in this thesis, foreign fishers were an essential part of sixteenth-century Ireland's maritime economy. Far from being unwelcomed by the Irish, many coastal communities were organised

¹² Patricia M. Byrne, *Went, Arthur Edward James, Dictionary of Irish Biography* (Cambridge, United Kingdom: Cambridge University Press, 2009), see for example, A. E. J. Went, "The Pursuit of Salmon in Ireland", *Proceedings of the Royal Irish Academy* 63 (1964); "Fisheries of the Munster Blackwater", *The Journal of the Royal Society of Antiquaries of Ireland* 90 (1960); "Fisheries of the River Liffey: II. Notes on the Corporation Fishery from the Time of the Dissolution of the Monasteries", *The Journal of the Royal Society of Antiquaries of Ireland* 84 (1954); "Fisheries of the River Liffey. Notes on the Corporation Fishery up to the Dissolution of the Monasteries", *The Journal of the Royal Society of Antiquaries of Ireland*, 83 (1953); "Material for a History of the Fisheries of the River Boyne", *Journal of the County Louth Archaeological Society* 13, no. 1 (1953).

¹³ Jim Mac Laughlin, *Troubled Waters: a Social and Cultural History of Ireland's Sea Fisheries* (Dublin: Four Courts Press, 2010).

¹⁴ *Ibid.*, p. 1.

¹⁵ See, Poul Holm, "Review of 'Troubled Waters'", *Mariner's Mirror* 97, no. 4 (2011) for a more in-depth critique of the book that came to similar conclusions outlined here.

¹⁶ John de Courcy, *Ireland's Sea Fisheries: History* (Dublin: Glendale Press, 1981).

¹⁷ *Ibid.*, p. 18.

to aid and profit from these visitors. de Courcy also dramatically simplifies the political arrangement of early modern Ireland, showing little concern for the island's political realities at that time.

Unlike de Courcy's work, the current study attempts to place Irish fisheries into the broader history of the sixteenth century's political and military events. In that respect, it is crucial to define what is meant by terms such as 'Old English' and 'Gaelic Irish' in this study. The Old English were a political group who identified themselves as descendants of the Norman invaders of the twelfth century; they were Catholic but stressed their 'Englishness' and loyalty to the English Crown. The name 'Old English' was not used in Ireland until the seventeenth century, with the term 'Anglo-Irish' commonly used before that.¹⁸ However, the term Old English has been widely adopted by historians to identify this group.

On the other hand, the Gaelic Irish identified themselves as Ireland's original inhabitants before the Norman invasion. They were Catholic as well but spoke Gaelic and maintained their own cultural customs and laws. Despite the differences, by the sixteenth century, there had been a considerable amount of 'intermarriage and cultural cross- assimilation' between the two communities, with the Gaelic Irish having become Anglicised and the Old English Gaelicised.¹⁹ The connections between these groups extended to fisheries as well, with both groups cooperating and sharing organisational structures. Additionally, with English plantation in the sixteenth century, a group of Protestant 'New English' settlers immigrated directly from Britain and retained a strong connection to their home countries in the following centuries. The arrival of this group would ultimately transform the access to and ownership of fisheries in Ireland.

There have also been many fisheries histories written in other parts of Europe, and the current work has drawn both methodological and thematic approaches from these studies. Poul Holm's work on Danish fisheries has been influential in this respect, as has J. Jónsson's research on Icelandic fisheries.²⁰ The scholarship of Arnvéd Nedkvitne and Alf Ragnar Níelssen concerning Norway's medieval and early modern fisheries also provided crucial context for the study of

¹⁸ T. W. Moody, F. X. Martin, and F. J. Byrne, eds., *A New History of Ireland. 3, Early Modern Ireland, 1534-1691* (Oxford: Oxford University Press, 1976), p. xlii.

¹⁹ Jane Ohlmeyer, "Introduction: Ireland in the Early Modern World", in *The Cambridge History of Ireland: Volume 2: 1550–1730*, ed. Jane Ohlmeyer (Cambridge: Cambridge University Press, 2018), p. 10.

²⁰ Poul Holm, "Human Impacts on Fisheries Resources and Abundance of the Danish Wadden Sea, c. 1520 to the Present", *Helgoland Marine Research* 59 (2005); J. Jónsson, "Fisheries off Iceland, 1600-1900", *ICES mar. Sci. Symp.* 198 (1992); Poul Holm, "The Danish Fisheries, c. 1450-1800: Medieval and Early Modern Sources and Their Potential for Marine Environmental History", in *The Exploited Seas: New Directions for Marine Environmental History (Research in Maritime History; 21)*, ed. P. Holm, T. D. Smith, and D. J. Starkey (St. John's, Newfoundland: International Maritime Economic History Association/Census of Marine Life, 2001).

fishing in Ireland.²¹ Norway was one of the major producers of dried cod (*Gadus morhua*)²², or stockfish, in the medieval and early modern periods.²³ This fish was one of the most important trading commodities of the age and found its way to Ireland as well.²⁴ Bo Poulsen's study of the Dutch herring fishery has also been critical to framing the current work. Using data from the primary sources, Poulsen mapped out Dutch herring catches and worked out the historical catch per unit effort (CPUE) of the Dutch fishery from the sixteenth century onward.²⁵ Poulsen's work showed the potential for historical sources with new digital methods, and a similar approach to the use of technology was applied in the current study.

Developments in the English fisheries over the medieval and early modern period were also relevant to what was happening in Ireland. England was Ireland's largest trading partner and English fishers regularly visited Irish waters.²⁶ Maryanne Kowaleski's research on the south-western English fisheries has been particularly relevant to this work and helped inform the broader history of fisheries interactions between Ireland and England.²⁷ Wendy Childs has also written extensively on English fisheries and the wider trade connections between Ireland, England, and Europe. Childs' perspective has been critical to this study and helped place Ireland's fisheries firmly within the European perspective.²⁸ The work of Michael Barkham for

²¹ Arnved Nedkvitne, "The Development of the Norwegian Long-distance Stockfish Trade", in *Cod & Herring*, ed. J. H. Barrett and D. C. Orton (Oxford: Oxbow, 2016); Alf Ragnar Nílelsen, "Norwegian Fisheries, c. 1100-1850", in *The North Atlantic Fisheries: Supply, Marketing and Consumption, 1560-1990*, ed. D. J. Starkey and James E. Candow (Hull: North Atlantic Fisheries History Association, 2006).

²² "Species Dashboard, Cod (*Gadus morhua*).", (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

²³ See also the work of Terje Inderhaug, "Stockfish Production, Cultural and Culinary Values", *Food Ethics* 5, no. 1 (2020).

²⁴ For more on the networks that facilitated the trade of stockfish see, Philippe Dollinger, *The German Hansa* (London: Macmillan, 1970); Justyna Wubs-Mrozewicz and Stuart Jenks, eds., *The Hanse in Medieval and Early Modern Europe* (Leiden: Brill, 2013).

²⁵ Bo Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860* (Amsterdam: Aksant, 2008), pp. 99-119; for more examples see "Marine Environmental History", pp. 4-6.

²⁶ The term fisher/fishers will be used to describe any person/persons engaged in the fisheries unless quoting directly from a primary source.

²⁷ M. Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", *The Economic History Review* 53, no. 3 (2000).

²⁸ Wendy R. Childs, "Commercial Relations Between Basque Provinces and England in the Later Middle Ages, c.1200-c.1500", *Itsas Memoria. Revista de Estudios Marítimos del País Vasco* 4 (2003); "The Commercial Shipping of South-Western England in the Later Fifteenth Century", *The Mariner's Mirror* 83, no. 3 (1997); "England's Icelandic Trade in the Fifteenth Century: The Role of the Port of Hull", in *Northern Seas Yearbook*, ed. P. Holm, O. Janzen, and J. T. Thór (Esbjerg: Fiskeri-og Søfartsmuseet, 1995); "Ireland's Trade with England in the Later Middle Ages", *Irish Economic and Social History* 9 (1982); "Irish Merchants and Seamen in Late Medieval England", *Irish Historical Studies* 32, no. 125 (2000); "Medieval English Trade in the North Sea: Denmark and Jutland, c1300 - 1500", in *A North Sea Region. West Jutland and the World II*, ed. Mette Guldberg Ellen Damgaard, Poul Holm (Esbjerg: Fiskeri-og Søfartsmuseets Forlag, 1998).

Spain and Laurier Turgeon for France were also crucial in this regard.²⁹ These authors, and others, will be discussed further in Chapter 3. The history of Newfoundland fisheries was additionally a vital component of this study. The seminal text on the English fishery in Newfoundland in the seventeenth century was written by Peter Pope, while new research by the NorFish team has also been important in revealing Ireland's place in the development of the fisheries in Newfoundland.³⁰

In recent years, scholars of Irish maritime and fisheries history have shown a greater awareness of this broader European context and its importance to Ireland's fisheries development. In their article, *Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster*, Mark Gardiner and T. E. McNeill argued that Ulster was part of a broader trade system across Europe and the demand for fish, in particular, drove that trade.³¹ The authors argue that to advance the study of fisheries history in Ireland; we need to collect evidence from a variety of sources, both archaeological and documentary. However, their article does not entirely achieve this aim, mainly relying on anecdotes, rather than a systematic evaluation of the historical evidence. Nevertheless, the article does illustrate the benefit of combining evidence streams, particularly in respect to Gaelic Irish fisheries, of which we know extremely little.

Colin Breen and John Raven's recent work has also been instrumental in furthering our understanding of the Gaelic Irish maritime economy.³² Breen and Raven establish that each Gaelic Irish kin group existed in different circumstances and adapted their maritime economy to the local environmental conditions. This observation is essential for the current study, as it will further expand on how geography impacted the development of maritime economies across

²⁹ Michael M. Barkham, "El comercio marítimo vizcaíno y guipuzcoana con el Atlántico peninsular (Asturias, Galicia, Portugal y Andalucía) y con los archipiélagos de Canarias y Madeira al principio de la Edad Moderna", *Itsas Memoria. Revista de Estudios Marítimos del País Vasco* 4 (2003); "French Basque 'New Found Land' Entrepreneurs and the Import of Codfish and Whale Oil to Northern Spain, c. 1580 to c. 1620", *Newfoundland Studies* 10, no. 1 (1994); "La industria pesquera en el País Vasco peninsular al principio de la Edad Moderna: ¿una edad de oro?", *Itsas Memoria. Revista de Estudios Marítimos del País Vasco* 3 (2000); "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", in *A History of the North Atlantic Fisheries* 1, ed. D. J. Starkey, J. T. Thór, and I. Heidbrink (Bremerhaven: German Maritime Museum of Bremen, 2009); "The Spanish Basque Irish Fishery & Trade in the Sixteenth-Century", *History Ireland* 9, no. 3 (2001); Laurier Turgeon, *The Era of the Far-Distant Fisheries: Permanence and Transformation (circa 1500-1850)* (St. John's: Memorial University of Newfoundland, 2005).

³⁰ Peter Pope, *Fish Into Wine: The Newfoundland Plantation in the Seventeenth Century* (Chapel Hill: University of North Carolina Press, 2004).

³¹ Mark Gardiner and T. E. McNeill, "Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster", *Proceedings of the Royal Irish Academy. Section C: Archaeology, Celtic Studies, History, Linguistics, Literature* 116C (2016).

³² Colin Breen and John Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", *Medieval Archaeology* 61, no. 1 (2017).

the Gaelic Irish parts of the coast. The authors also firmly place Gaelic Ireland within the North Atlantic's larger cultural and economic system, something the current study attempts to build on in its examination of the fisheries. Breen and Raven also conduct a detailed analysis of Gaelic architecture and building remains. These structures can tell us much about what resources and coastal areas were most important to the families who built them.

Other researchers have been adding to our knowledge of the Gaelic maritime economy with studies of specific families. For example, a 2019 study of the O'Donnell's by Simon Egan looked at how activity in the maritime sphere increased the family's power over the medieval period.³³ Older research also proves relevant in this field, with Mary O'Dowd's study of the Gaelic Irish in Sligo acting as a valuable resource.³⁴ Colin Breen has also conducted a detailed study of the maritime economy of O'Sullivan Beare in Cork.³⁵ Breen has further collaborated with Aidan O'Sullivan on *Maritime Ireland, An Archaeology of Coastal Communities*, which provided a comprehensive overview of maritime archaeology in Ireland from the Mesolithic to Modern period. Regarding early modern fisheries, the authors write that 'it has been too easy to generalise about the fishing industry over the last few hundred years', arguing that fisheries were a multi-layered and complex industry that impacted the whole island of Ireland and operated on many social levels, from the local to international.³⁶ The current study takes this to heart by unravelling the complex structures and relationships that underpinned the sixteenth-century fisheries.

Other archaeological studies have focused on specific areas and surveyed them in detail. For example, Thomas McErlean, Rosemary McConey and Wes Forsythe edited a significant volume on Strangford Lough that contains many insights on the areas medieval and early modern fisheries.³⁷ Aidan O'Sullivan has also surveyed the maritime archaeology and cultural identity of the Shannon Estuary.³⁸ While Mark Gardiner examined the archaeological remains of built structures in Ardglass to learn what they can tell us about the development of the town and its fisheries. A recent collection of essays entitled *Cod & Herring: The Archaeology &*

³³ Simon Egan, "By Land and by Sea: The Role of the Maritime Sphere in the Expansion of O'Donnell Power ca. 1380–1500", *Maritime Communities of the North Atlantic Arc in the Early Modern Period Journal of the North Atlantic Special Volume 12* (2019).

³⁴ Mary O'Dowd, *Power, Politics and Land: Early Modern Sligo 1568-1688* (Belfast: The Institute of Irish Studies, 1991).

³⁵ Colin Breen, *The Gaelic Lordship of the O'Sullivan Beare* (Dublin: Four Courts Press, 2005).

³⁶ Aidan O'Sullivan and Colin Breen, *Maritime Ireland, An Archaeology of Coastal Communities* (Stroud: Tempus, 2007), p. 217.

³⁷ Thomas McErlean, Rosemary McConkey, and Wes Forsythe, eds., *Strangford Lough: An Archeological Survey of the Maritime Culture Landscape* (Belfast: The Blackstaff Press, 2002).

³⁸ Aidan O'Sullivan, "Medieval Fish Traps on the Shannon Estuary, Ireland: Interpreting People, Place and Identity in Estuarine Landscapes", *Journal of Wetland Archaeology* 5, no. 1 (2013), p. 70.

History of Medieval Sea Fishing also contained two articles about Ireland.³⁹ In his article, Colin Breen provides a succinct overview of the development of the Irish fisheries over the medieval period and into the sixteenth century.⁴⁰ In the second article, Sheila Hamilton-Dyer provides an overview of the evidence currently available from fishbone assemblages in Ireland from the medieval period.⁴¹ These collections can help us understand the most significant fishing sites and species in medieval Ireland. However, as Hamilton-Dyer writes, the data has limitations, as the bones of smaller species such as herring (*Clupea harengus*) have often been overlooked and not collected by archaeologists in past excavations.⁴²

The current thesis mainly focuses on the analysis of documentary records, so the archaeological studies discussed above, and others not mentioned here, provide invaluable additional insights. Archaeological research can help fill gaps found in the documentary record and provide more robust answers to the key questions posed here. Overall, there has been positive progress made in Irish maritime and fisheries history in recent years. However, the next step in the field's progression is for studies such as this to investigate fisheries with far greater depth and breadth and bring together larger bodies of evidence. Ultimately, it is the combination of both types of evidence that leads to the most comprehensive understanding of how fisheries grew and developed in the late medieval and early modern periods.

While not dedicated to fisheries, a host of other studies has helped advance our knowledge of the economics of the fish trade and fish consumption in sixteenth-century Ireland. For example, David B. Quinn's work on the Anglo Irish in Ulster is not focused on the fisheries but provides many important details on how fisheries in Ulster developed in the early sixteenth century.⁴³ The history of Ireland's national and international trade is also essential to this research. Trade records are among the key primary sources used in this study, and this work attempts to build on previous work concerning Ireland's international trade. The work of Ada Kathleen Longfield from the 1920s provides an early and significant contribution to this field. Longfield examined the Bristol port books and customs accounts to gauge the nature and extent of Ireland's foreign

³⁹ James H. Barrett and David C. Orton, eds., *Cod & Herring: The Archaeology & History of Medieval Sea Fishing* (Oxford: Oxbow, 2016).

⁴⁰ Colin Breen, "Marine Fisheries and Society in Medieval Ireland", in *Cod & Herring*, ed. J. H. Barrett and D. C. Orton (Oxford: Oxbow, 2016).

⁴¹ S. Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland", in *Cod and Herring, the Archaeology and History of Medieval Sea Fishing*, ed. J. H. Barrett and D. C. Orton (Oxford: Oxbow Books, 2016).

⁴² "Species Dashboard, Herring." (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>; Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland", p. 236.

⁴³ David B. Quinn, "Anglo-Irish in Ulster In the Early Sixteenth Century", in *Proceedings and Reports of the Belfast Natural History and Philosophical Society*, ed. Arthur Deane (Belfast: The Northern Whig, 1934).

trade at this time, including the trade of fish.⁴⁴ In more recent times, new trade data from Bristol has been developed and published by Evan Jones, Margaret Condon and Susan Flavin; this information has allowed for a far more detailed study of the fish trade from Ireland to Bristol.⁴⁵ The development of this data will be discussed further in the following chapter.

The Master's dissertation of Susan Flavin was an important next step in the analysis of the Bristol records and added further detail to Longfield's assessment of the fish trade.⁴⁶ Flavin's PhD thesis and subsequent book, *Consumption and Culture in Sixteenth-Century Ireland*, further showed the potential of trade records to understand consumption patterns in sixteenth-century Ireland.⁴⁷ Ireland's international trade in the medieval period has been summarised well by Tim O'Neill in his book, *Merchants & Mariners in Medieval Ireland*.⁴⁸ O'Neill's work contains many useful details concerning the medieval fisheries, but they are not the focus of his work and much more remains to be uncovered about fisheries in this period. There are many other works with incidental information relating to fisheries relevant to this thesis; each chapter will discuss this literature as it relates to its central topic.

Overall, studies in recent years have begun to consider Ireland's fisheries' history in greater detail and the broader European context. However, the study of Irish fisheries history is still in its infancy and much more remains to be done. The current work draws from a wide range of literature, from the field of marine environmental history to works on Irish economic, social, and political history. This thesis's ultimate aim is to demonstrate that we can understand Irish fisheries in far greater detail than other historians have yet exhibited. It also sets out to abolish common misconceptions concerning fisheries and place them firmly in the broader history of Ireland and European in the sixteenth century. In this respect, each chapter of this study sets out to address a different aspect of Ireland's fisheries history and answer a different set of key questions.

The current study's focus is on marine fisheries, those being fisheries that occur in saltwater bodies. In general, marine fisheries were larger and more commercially developed in the sixteenth century, but this was not universally true. Some salmon fisheries on rivers such as

⁴⁴ Ada Kathleen Longfield, *Anglo-Irish Trade in the Sixteenth Century* (London: George Routledge & Sons Ltd, 1929).

⁴⁵ The full list of data from Bristol employed here can be found in Appendix 3 in the online data appendices, see <http://hdl.handle.net/2262/96098>.

⁴⁶ Susan Flavin, "The Development of Anglo-Irish Trade in the Sixteenth Century" (Unpublished MA thesis, University of Bristol, 2004).

⁴⁷ Susan Flavin, "Consumption and material culture in sixteenth-century Ireland", *The Economic History Review* 64, no. 4 (2011); *Consumption and Culture in Sixteenth-century Ireland: Saffron, Stockings and Silk* (Woodbridge: The Boydell Press, 2014).

⁴⁸ Timothy O'Neill, *Merchants and Mariners in Medieval Ireland* (Dublin: Irish Academic Press, 1987).

the Bann were highly economically significant and saw foreign fishers travel large distances to exploit them. These commercially important salmon fisheries will be discussed at length; however, most other river and lake fisheries are not studied in detail. There are abundant records relating to the granting and ownership of weirs and fishing rights on rivers, but these are not exploited in the current study.⁴⁹ A future study could use these records to trace the changing access to river fisheries across the early modern period, but this was out of the scope of the current work.

The sixteenth century was chosen as the period for this study because it was an extremely transformative period in Ireland's fisheries history. As we will see, at the beginning of the sixteenth-century, fisheries were one of the largest industries in Ireland but declined considerably by the end of the century. Tracing that change is a core aim of this thesis. Furthermore, in the sixteenth century, records concerning the fisheries become numerous, making a study such as this possible. However, the period before 1500 is explored in this study; fisheries were already well developed in Ireland from the late fifteenth century and this longer-term development is vital to understand fisheries later in the sixteenth century.

The year 1603 was chosen as the end date for this study because it marks a significant milestone in Irish history and signifies the profound changes that were happening to fisheries in Ireland at that time too. On 30 March 1603, Hugh O'Neill surrendered to Charles Blount, 8th Baron Mountjoy and ended the Nine Years War. Unbeknownst to O'Neill, Queen Elizabeth had died only days earlier on the 24 March 1603.⁵⁰ Queen Elizabeth's death and the surrender of O'Neill marked both the end of Gaelic Irish power and the conclusion of the Tudor dynasty. These events were the climax of what was a tumultuous century in Ireland, a century marked by the incremental 're-conquest' of Ireland by the English state. Because of these events, 1603 is a natural breakpoint to end the study of fisheries in this period. For ease, when this thesis refers to the sixteenth century, it is referring to the period from 1500 to 1603.

Chapter 1, which follows this introduction, outlines in detail primary sources that will be used to answer this study's key questions. It then explores the innovative new methods that will be used to organise, analyse, and visualise these sources. At the core of this thesis's methodology are two relationship databases, one designed for qualitative information and the other for quantitative data. These databases were designed to deliver a far more systematic and comprehensive approach to collecting and analysing evidence related to Irish fisheries than

⁴⁹ For example, the Irish fiants and patent rolls contain many such grants, these sources are discussed further in Chapter 1, Section 1.2.

⁵⁰ Colm Lennon, *Sixteenth Century Ireland, The Incomplete Conquest* (Dublin: Gill & Macmillan, 2005), p. 303.

has been attempted before. The methods explained in this chapter are vital to expanding our knowledge of fisheries beyond the anecdotal.

Chapter 2 briefly traces the development of Irish fisheries during the medieval period to the beginning of the early modern age. In this study, the medieval period is defined from the year 400 to 1500, and the early modern from 1500 to 1800.⁵¹ After this overview of the medieval fisheries, the chapter then focuses on providing a detailed snapshot of Ireland's fisheries around the year 1500. This snapshot will illustrate the diversity and character of Ireland's fisheries at the beginning of the sixteenth century and will set the scene for the exploration of how these fisheries developed and changed over the rest of the sixteenth century. This chapter aims to illustrate the wide diversity of fisheries around the year 1500 and understand how the political and geographic makeup of different parts of the coast impacted the type of fisheries that operated there.

Following this, Chapter 3 sets out to establish the basic facts and nature of fisheries in sixteenth-century Ireland. These facts have not been established by any other study and are necessary to fully comprehend the fishing industry's broader impact during the century. This chapter uses a range of digital methods to establish the most popular fishing locations and target species in the sixteenth century. It further aims to examine the scale and character of foreign fishing operations by using primary material from Irish sources and secondary research from other parts of Europe. Finally, this chapter asks how sixteenth-century fishers organised themselves and outlines the fishing methods and vessels they used to make their catches.

Chapter 4 asks what the scale of fish exports from Ireland was in the late fifteenth and sixteenth centuries, and what export levels can tell us about the trajectory of the fisheries across the century. This chapter further queries the importance of fish as an export commodity and to the Irish economy as a whole in this period. This chapter's data was collected from a variety of sources and collated in a central database to provide a far more extensive view of fish exports than has been achieved before. Additionally, this chapter asks if it is possible to establish a limited price series for fish in sixteenth-century Ireland and what this can tell us about the total monetary value of exports.

Chapter 5 explores how war and piracy impacted the development and sustainability of fisheries during the sixteenth century. The chapter attempts to understand how terrestrial conflict directly affected fisheries and fishing communities. It also considers the strategic and

⁵¹ This is the same periodization used by Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland", p. 231.

practical role fisheries played in warfare. Additionally, Chapter 5 analyses the writings of English authors and government officials to understand how they viewed fisheries and how marine resources factored into plans for plantation. The chapter aims to understand how colonisation and English conquest fundamentally altered fisheries by changing who could access fishing resources. The second part of the chapter establishes the frequency of piracy events in Irish and adjacent waters over the sixteenth century and explores examples from the sources of how piracy incidents damaged and impaired fishing enterprises.

Using mainly army ration and supply records, the first part of Chapter 6 looks at how fish consumption in Ireland changed across the sixteenth century. The chapter gauges how important fish was to soldiers' diets in this period and explores what types of fish were commonly eaten by the army. The cultural and religious significance of fish to different Irish communities will also be explored. Evidence Dublin City and Gaelic Irish poetry will be probed for what it can tell us about how people viewed fish and what role it played in their traditions. The second part of this chapter explores the relationship between fisheries and the natural environment in the sixteenth century. It examines the impact fisheries had on ecosystems and how fishing activity may have damaged the long-term sustainability and health of fish stocks. Additionally, the chapter investigates the latest developments in Ireland's climate history and asks how climate change may have impacted the trajectory of fisheries across the fifteenth and sixteenth century. Lastly, the claims of other historians regarding the role of fish migration in the development of the industry will be examined.

Chapter 1 – Sources and Methods

“They fish with hooks of gold and we but with speech.”

Sir William Cecil, writing to Sir Henry Sidney, 13 July 1567.⁵²

1.1 Introduction

As the introduction outlined, there are few comprehensive studies of early modern Irish fisheries, and everything written to date has tended to rely on anecdotes rather than systematically collected evidence. The current study aims to change that by utilising a range of digital methods designed to collect and analyse evidence from a variety of sources systematically. This thesis intends to collect all relevant information about fisheries from a selection of primary sources and amalgamate that evidence into two central relational databases. All the data employed in this study has been made freely available and is hosted online in Trinity College Dublin’s TARA archive.⁵³

No sources from early modern Ireland deal specifically with fisheries; rather, the evidence is scattered throughout a range of primary sources and can be found in many different contexts. There are three main categories of evidence employed in this study: qualitative, quantitative, and visual evidence. Every source used in this study fits into one of these categories, and each of them demands a different method and approach. In addition, archaeological and ecological observations from existing studies were interwoven with the historical data collected from primary sources. The combination of these evidence types makes the current study a more comprehensive account of sixteenth-century fisheries than has existed before.

A core approach of this thesis is the use of databases to collect, organise and analyse information gathered from the primary sources. The two central databases designed for this research were the Qualitative Fishing Database (QFD), which deals with qualitative evidence, and the Fish Trade Database (FTD), which contains quantitative information. A variety of other

⁵² Cecil was referring to French interference in Scotland when he used the phrase, Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 1: 1509-1573* (London: Longman, Green, Longman, & Roberts, 1860), no. 59, p. 342, QFD ID 587.

⁵³ See, *The History of Ireland's Marine Fisheries, 1500 to 1603 Data Appendices*, hosted at <http://hdl.handle.net/2262/96098>. The data hosted in TARA is in PDF format, please contact the author at, hayesp6@tcd.ie, if you wish to acquire data in other formats.

approaches were employed to analyse visual sources such as maps, and these will also be explained later in the chapter.

1.2 Primary Sources

Before exploring the design of the databases, this section will examine the primary sources employed in this work. Some sources that were considered for analysis but ultimately disregarded will also be discussed. One of the critical source collections used in this research are the records of the English High Court of the Admiralty. Their significance to this study lies in the fact they relate to all manner of maritime affairs, from commercial disputes to crimes at sea, such as piracy.⁵⁴ The court has also generated a vast number of documentary records spanning the fifteenth century to the mid-twentieth century, although records do not become numerous until the sixteenth century.⁵⁵ While few entries in the court's records specifically relate to fisheries, their maritime focus means they hold much incidental detail on the subject.

In addition to the English Court, Ireland also had its own admiralty court from the sixteenth century onwards, of which Kevin Costello has written an extensive legal history. John Appleby and Mary O'Dowd have traced the early development of the Irish court.⁵⁶ Unfortunately, most of the records from the Irish court have not survived; however, many cases related to Ireland were still heard in the English court following the establishment of the Irish. So, despite the lack of Irish records, we have many documents relating to Irish cases and events in the English records. However, by their nature, the cases heard in the English court are biased towards merchants from the more anglicised parts of Ireland, as well as wealthier merchants who could afford to travel to England.

The massive volume of records generated by the English Court has made them difficult for historians to use. Figure 1.1 on the next page shows two examples of records from the seventeenth-century admiralty court manuscript collection. On the left is the deposition of John Babb from 1640. This document illustrates the script and style of the depositions. On the right is a box of loose, unsorted material from 1670-78, which demonstrates the difficulty of working with this record set. Given the difficulty of working with these manuscripts, the current study adopts a digital research strategy, utilizing Appleby's *A Calendar of Material Relating to Ireland*

⁵⁴ "High Court of Admiralty Research Guide." (The National Archives of the United Kingdom, 2018) <http://www.nationalarchives.gov.uk/help-with-your-research/research-guides/high-court-admiralty-records/>.

⁵⁵ For a collection of the earliest records of the court, see; A. Alwyn Ruddock, "The Earliest Records of the High Court of Admiralty", *Historical Research* 22, no. 66 (1949).

⁵⁶ Kevin Costello, *The Court of Admiralty of Ireland, 1575-1893* (Dublin: Four Courts Press in association with the Irish Legal History Society, 2011); John C. Appleby and Mary O'Dowd, "The Irish Admiralty: Organisation & Development 1570-1640", *Irish Historical Studies* 24, no. 95 (1985).

from *The High Court of the Admiralty Examinations 1536-1641*.⁵⁷ This extensive calendar was painstakingly composed by Appleby from the original manuscripts and contains witness depositions relating to Ireland from the Examinations and Answers series of records (HCA 13).⁵⁸ There is also a second volume of material covering the period from 1641 to 1660, which was compiled by Elaine Murphy.⁵⁹ While this second volume is not directly relevant to the current study, it is of great value to historians of the seventeenth century. The limitation of the approach taken in this study is that any material not included in these calendars has not been considered. However, the choice to focus on the printed material was made to maximise the amount of material that could be covered in order to harvest the highest number of references to the fisheries possible. Undoubtedly, future archival research, following Appleby and Murphy's example, would uncover further information that could enhance the data presented in this study.

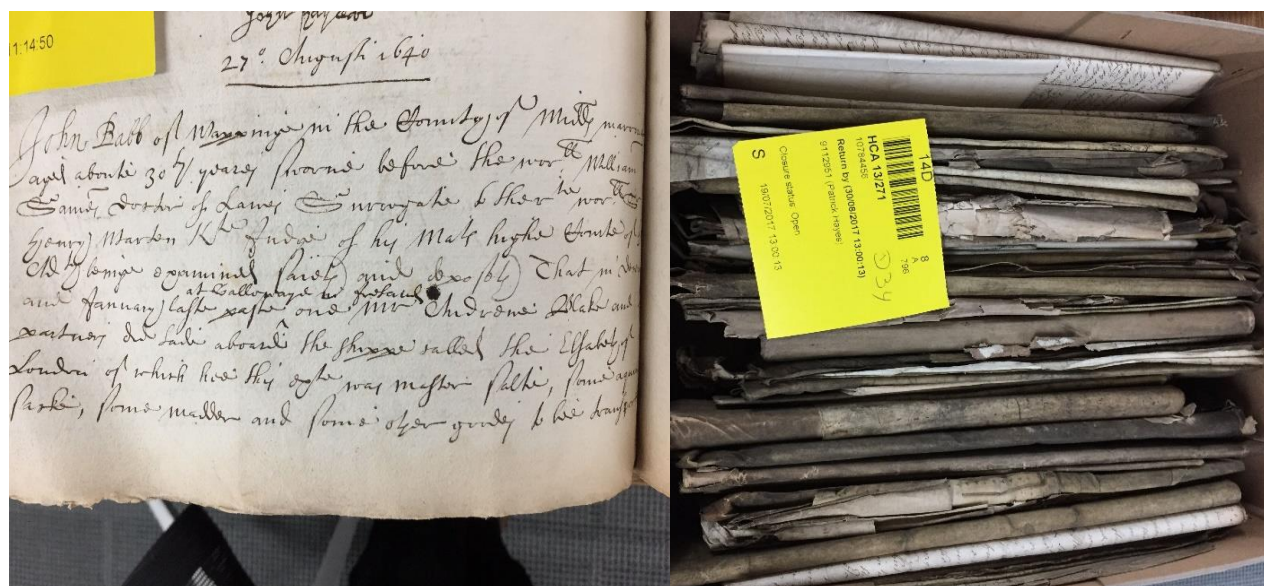


Figure 1.1 – Left, deposition of John Babb 1640. Right, Box of material from HCA 13/271.⁶⁰

Moving on, the Irish State Papers are the most extensive documentary source collection used in this study. They mostly comprise correspondences between the English officials within Ireland and the central government in London.⁶¹ The papers contain a wide variety of material

⁵⁷ John C. Appleby, ed. *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641* (Dublin: Irish Manuscripts Commission, 1992).

⁵⁸ HCA 13, *The High Court of Admiralty: Instance and Prize Courts: Examinations and Answers, 1536-1826*, (The National Archives: London).

⁵⁹ Elaine Murphy, ed. *A Calendar of Material Relating to Ireland from the High Court of the Admiralty, 1641-1660* (Dublin: Irish Manuscripts Commission, 2011).

⁶⁰ HCA 13/56 1640-1641, 27 August 1640, Deposition of John Babb, ff 199v-200v; HCA 13/271 1670-1678.

⁶¹ "Introduction: State Papers Ireland 1509-1782: Government Papers on Irish Affairs." (The National Archives of the United Kingdom, 2019) <https://www.nationalarchives.gov.uk/help-with-your-research/research-guides/state-papers-ireland-1509-1782/>.

pertaining to matters such as security, finance, trade, military campaigns, and property ownership. Few records relate directly to the operation of fisheries, but details about fisheries emerge in many other contexts. However, like any records from the early modern period, the State Papers must be used with care. For example, only the summaries of internal correspondence have survived, and those summaries reflect what the chief governors in Dublin wanted officials in London to see. As letters were often sent in batches, the dates on these relate to the day they were sent – not necessarily the day they were written.⁶² Additionally, the burning of the Irish Four Courts in 1922 destroyed most of the State Papers kept in Ireland, so what remains was gathered from collections in Great Britain. However, even before the Four Courts' burning, little of the inward correspondence to Ireland had survived, meaning most of the extant records are outwards correspondence to London.⁶³

The State Papers cover almost the whole study period, starting in 1509 and running to 1603 and beyond. All the extant State Papers from this period have been calendared in some form. The first calendars covering the period from 1509 to 1603 were compiled between 1860 and 1912 and published in 11 volumes.⁶⁴ However, these old calendars vary wildly in quality with the first few volumes severely lacking in detail. So, starting in the year 2000, the Irish Manuscripts Commission and National Archives at Kew began publishing a new series of calendars to replace the older and deficient ones.⁶⁵ Over five volumes, these new calendars cover the period 1509 to 1553, as well as 1566 to 1575.⁶⁶ While these new calendars only cover up until 1575, the original calendars for the latter part of the sixteenth century are fortunately more reliable.

In addition to these official State Papers, there are several series of letters that were kept and held in private collections. For example, the Calendar of Carew Manuscripts covers the period from 1515 to 1625 and contains six volumes of correspondence and other material related to Sir George Carew's time in office. Carew was a noted antiquarian who served in a number of

⁶² R. Dudley Edwards and Mary O'Dowd, *Sources for Early Modern Irish History, 1534-1641* (Cambridge: Cambridge University Press, 1985), p. 11.

⁶³ *Ibid.*, p. 11.

⁶⁴ See the bibliography and Appendix 1 of the online data appendices (<http://hdl.handle.net/2262/96098>) for the complete list.

⁶⁵ The Kew archives were only involved in the first volume published in 2000, Ellis Steven and James Murray, eds., *C.S.P. Ire., Tudor Period 1509-1547* (Dublin: Irish Manuscripts Commission, 2017), p. xi.

⁶⁶ Mary O'Dowd, ed. *C.S.P. Ire., Tudor Period 1571-1575* (London: Public Record Office, 2000); Bernadette Cunningham, ed. *C.S.P. Ire., Tudor Period 1566-1567* (Dublin: Irish Manuscripts Commission, 2009); *C.S.P. Ire., Tudor Period 1568-1571* (Dublin: Irish Manuscripts Commission, 2010); Colm Lennon and Irish Manuscripts Commission, eds., *C.S.P. Ire., Tudor period 1547-1553*, Revised edition. ed. (Dublin: Irish Manuscripts Commission, 2015); Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*.

capacities in Ireland, including as Lord President of Munster from 1600 to 1603.⁶⁷ The Lambeth Palace Library in London now holds much of Carew's material, and while the bulk of this has been calendared some manuscript records remain uncalendared and were not included in this study. A list of these manuscripts has been compiled by Brian Donovan and David Edwards.⁶⁸ The *Letter Book of Sir Arthur Chichester* is another collection of primate material, and while most of the material relates to the seventeenth century, the book was searched for relevant details about fisheries.⁶⁹

In addition to the printed calendars, the State Papers Online website provides access to digital images of all the original manuscripts physically housed at the National Archives in London.⁷⁰ These digital manuscripts were extensively used in this research. In most cases, the printed calendars were first used to find relevant entries, and then the digital manuscripts were consulted and transcribed to extract extra details related to fisheries. Figure 1.2 on the following page is an example of a page from the online State Papers manuscripts. This record was initially found using the calendar, but only noted 'beef and herrings sent from Dublin to Limerick, Cork, and Waterford'.⁷¹ The online manuscript was then consulted for further detail; it contained far more information regarding the amount of fish transported, with 20 tonnes being sent to Limerick, 13 to Cork and 32 to Waterford.⁷² Ultimately, hundreds of such manuscripts were consulted and transcribed to uncover new details about Irish fisheries.

⁶⁷ Moody, Martin, and Byrne, *A New History of Ireland*, p. iv; Edwards and O'Dowd, *Sources for Early Modern Irish History, 1534-1641*, p. 104.

⁶⁸ Brian C. Donovan and David Edwards, *British sources for Irish history, 1485-1641 : a guide to manuscripts in local, regional and specialised repositories in England, Scotland and Wales*, *Irish Manuscripts Commission (Series) Vol.85 (Dublin: Irish Manuscripts Commission, 1997)*, pp. 162-165.

⁶⁹ Arthur Chichester and Dudley R. Edwards, "Letter-Book of Sir Arthur Chichester", *Analecta Hibernica* 8 (1938).

⁷⁰ "The State Papers (SP) Online: Early Modern Government in Britain and Europe." (Gale, 2020) <http://gale.cengage.co.uk/state-papers-online-15091714.aspx>.

⁷¹ Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585* (London: Longman, Green, Longham, & Roberts, 1867), no. 21, p. 424, QFD ID 1582.

⁷² Note of beef and herrings sent from Dublin, 13 Jan 1583 SP 63/99 f.42, QFD ID 1582.

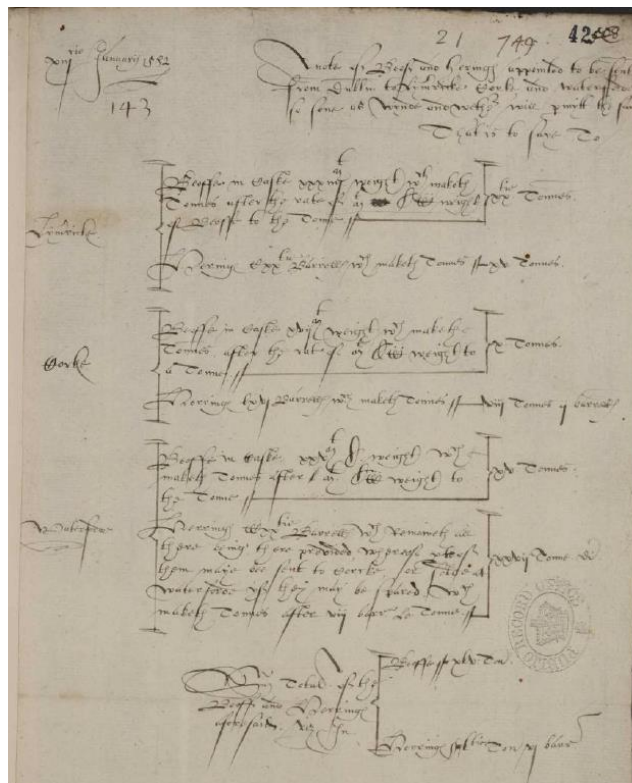


Figure 1.2 – Note of beef and herrings sent from Dublin, 13 Jan 1583.⁷³

A large selection of maps was also utilised in this study. These maps can impart a myriad of details concerning fisheries and maritime landscapes not attainable through other sources. The majority of sixteenth-century maps used in this study originate in two core online collections. One of these is a new collection compiled by the National Archives in London, which contains 60 Tudor and Stuart maps covering the period from 1558 to 1610.⁷⁴ This collection is an incredible resource that has been made far more accessible through the process of digitisation. The library of Trinity College Dublin has also worked to digitise a collection of Tudor and Stuart maps known as the *Hardiman Atlas*.⁷⁵ This compilation of 70 maps was initially collected by George Carew but was later rediscovered and reorganised by Galway Historian James Hardiman in the early nineteenth century. Throughout this study, several maps from both collections have been used to examine images of boats, aquatic life, and fishing towns.

Two volumes of printed maps from the National Library of Ireland were also used in this study. The first comprises a range of maps that depict the whole island of Ireland, while the second

⁷³ Ibid.

⁷⁴ Irish Maps c.1558-c.1610, MPF 1/35-102, (The National Archives: London) <https://www.nationalarchives.gov.uk/help-with-your-research/research-guides/irish-maps-c1558-c1610/>.

⁷⁵ James Hardiman and George Carew Totnes, *Hardiman Atlas* (Trinity College Dublin Digital Collections: Dublin) <https://www.tcd.ie/library/manuscripts/collections/maps.php>.

contains maps of Dublin city.⁷⁶ Relevant maps were collected from other sources as well. For example, a map of fishing at Baltimore was provided by Sheffield City Archives.⁷⁷

Additionally, this thesis makes extensive use of trade data from port books and customs accounts. These records were maintained in English, Welsh, Irish and Scottish ports to report on the customs duties paid on overseas trade. Unfortunately, no sixteenth-century Irish port books have survived, so this study relies on the records of Irish imports to English, Welsh, and Scottish ports. In England and Wales, the port books and customs accounts were recorded by officials known as customers or collectors, who submitted their 'particular' accounts each year to the exchequer where they were audited and stored.⁷⁸ Figure 1.3 on the next page shows a page from a Bristol Port Book from 1601. This book serves as an example of a good quality manuscript; many others are in far worse condition. Additionally, many of the manuscript folios are currently unavailable to researchers due to ongoing restoration work and treatment for mould.⁷⁹

The primary purpose of these records was not to document the volume of trade meticulously, but rather to trace the customs duties paid and owed to the Crown.⁸⁰ Despite this, many of these records can be used to understand the volume of goods moving between ports. However, the quality of data differs markedly between record sets, ranging from high levels of detail and lists of every item of cargo to simple records of generic bulk shipments. The temporal and spatial coverage is also patchy; records do not exist for every port or every year. Because of this, they can only provide snapshots of trade over time. Moreover, there was also always a certain amount of customs evasion and smuggling between ports that would have gone unrecorded. However, according to Evan Jones, smuggling was most common for prohibited or highly taxed goods. Most other goods, including fish, were traded openly and in line with customs checks.⁸¹

⁷⁶ J. H. Andrews, ed. *Ireland from Maps* (Dublin: The National Library of Ireland, 1980); Noel Kissane, Anngret Simms, and Howard B. Clarke, eds., *Dublin Historic Maps* (Dublin: National Library of Ireland, 1998).

⁷⁷ "Baltimore, Ireland", Undated (Wentworth Woodhouse Muniments, Str P/20/100: Sheffield Archives).

⁷⁸ Evan Jones and Susan Flavin, eds., *Bristol's trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts* (Dublin: Four Courts Press, 2009), p. xi.

⁷⁹ Stephen Gadd, ed. *Portfolio: Exchequer Port Book Project* (Winchester: The University of Winchester, 2017), <http://portfolio.winchester.ac.uk/>.

⁸⁰ R. J. Hunter and Brendan Scott, eds., *The Ulster Port Books, 1612-15* (Belfast: Ulster Historical Foundation, 2012), p. xi.

⁸¹ Evan Jones, "Illicit Business: Accounting for Smuggling in Mid-Sixteenth-Century Bristol", *Economic History Review* LIV (2001), p. 36.

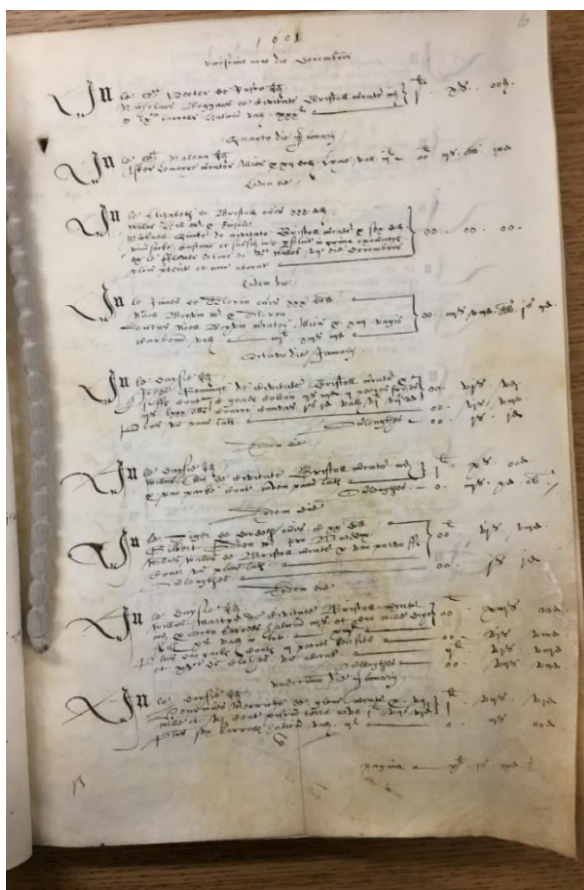


Figure 1.3 – Page from Bristol Port Book 1601.⁸²

A central aim of this thesis was to gather as many published and digitised port books and customs accounts as feasible and combine them in FTD to allow for the study of broader trends in the export of fish from Ireland. In this respect, the English port of Bristol provides some of the most detailed and comprehensive customs accounts for the fifteenth and sixteenth centuries. In the early 2000s, the ERC funded *Ireland-Bristol trade in the sixteenth-century* project at the University of Bristol worked to fully transcribe, digitise and publish the eleven extant Bristol port books and customs accounts for the sixteenth century (up to 1601).⁸³ Evan Jones and Susan Flavin published the finished work in 2009, and the related data was also released online.⁸⁴ Jones and Margaret M. Condon subsequently published digital versions of

⁸² E 190/1133/1: Port: Bristol, Official: Controller Overseas, Mich. 1601, - Mich. 1602, (The National Archives: London).

⁸³ Evan Jones and Susan Flavin, eds., *Ireland-Bristol Trade in the Sixteenth Century* (Bristol: University of Bristol, 2012), <http://www.bris.ac.uk/Depts/History/Ireland/datasets.htm>.

⁸⁴ *Bristol's Trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts*.

Bristol's accounts for the fifteenth century.⁸⁵ The work of Jones, Flavin and Condon has been particularly influential on this study, as the basic structure of the FTD was based on the sixteenth-century Bristol port book dataset. Wendy Childs has also published summaries for several more fifteenth-century Bristol accounts.⁸⁶ The *Gloucester Port Book* project from the 1990s also succeeded in digitising Gloucester's trade records from 1575 to 1765.⁸⁷ However, after a detailed assessment of the data, it was decided it was poor quality and contained too few details related to Ireland to be included in the FTD.

Data from several English and Welsh ports was also extracted from printed volumes. Chester was Dublin's largest trading partner in the Irish sea during the sixteenth century.⁸⁸ Several of the Chester customs accounts from the fifteenth and sixteenth centuries have survived and were published by K. P. Wilson in 1969.⁸⁹ The Chester accounts do not have the same level of temporal coverage or detail as the Bristol accounts, making them far less useful for establishing trade patterns. However, they contain enough detail to understand which fish species were most frequently traded and what Irish ports engaged in trade with Chester. Data related to the trade of fish and any trade to Ireland was manually extracted and tabulated from the printed volume on Chester for this study.

Several Welsh port books and customs accounts have also been printed, but these only begin in 1550 and run to 1603.⁹⁰ Welsh ports had a very active trade with south-east Ireland and Bristol in the latter half of the sixteenth century, and these records illustrate well the dynamics of that trade. Again, data from the printed Welsh volume related to fish and Ireland was manually extracted and added to the database. A limited amount of data is also available from Scotland, compiled by Martin Rorke in his study of Scottish overseas trade.⁹¹ This data was not added to the FTD due to its limited nature; however, Chapter 4 will explore what it can tell us about Ireland's fish trade with Scotland in the sixteenth century.

⁸⁵ M. Condon and Evan Jones, eds., *Bristol 'Particular' Customs Account Transcriptions* (Bristol: University of Bristol, Research Data Repository, 2016-2019), <http://www.bristol.ac.uk/history/research/cabot/publications/>.

⁸⁶ Childs, "Ireland's Trade with England in the Later Middle Ages".

⁸⁷ D. Hussey et al., eds., *Gloucester Port Books, 1575-1765*, SN: 3218 vols. (Wolverhampton: UK Data Service, 1996), <http://doi.org/10.5255/UKDA-SN-3218-1>.

⁸⁸ Moody, Martin, and Byrne, *A New History of Ireland*, p. 6.

⁸⁹ K. P. Wilson, ed. *Chester Customs Accounts, 1301-1566* (Liverpool: Record Society of Lancashire and Cheshire, 1969).

⁹⁰ Arthur Edward Lewis, ed. *The Welsh Port Books (1550-1603): with an Analysis of the Customs Revenue Accounts of Wales for the Same Period*, Cymmrodorion record series vol.12 (London: Issued by the Honourable society of Cymmrodorion, 1927).

⁹¹ Martin Rorke, "Scottish Overseas Trade, 1275/86-1597" (PhD diss., University of Edinburgh, 2001); "Scottish Overseas Trade, 1275/86-1597 Vol. II" (PhD diss., University of Edinburgh, 2001).

There are no extant Irish export records from the sixteenth century. However, there are some records available from the early seventeenth century. The only Irish port books that survived from this period are the Ulster Port Books for the years 1612 to 1615. Today, the originals are found in the West Yorkshire Archive Service, which explains why they survived compared to those records stored in the Four Courts. They were transcribed initially by R. J. Hunter but not published in his lifetime. However, they were posthumously published by the Ulster Historical Society, following compilation and editing by Brendan Scott.⁹² The Ulster Historical Society kindly provided the published data in Microsoft Excel format for this study, and this data was added to the FTD. However, this study does not offer an in-depth analysis of these records due to their limited scope and because they fall outside the study period.

In the early seventeenth century, the Irish customs system was poorly organised, so in order to generate more income, the customs were farmed out to a succession of English syndicates who took over the collection process. These operations generated statistical series that were intended to show the operators how their business was performing. These customs statistics provide our most complete data on Irish exports, including fish, from the early seventeenth century. The surviving evidence from these series was collected by David Dickson and Donald Woodward and published in 1999.⁹³ Unlike the data from Ulster, these accounts cover the whole of Ireland and therefore provide a useful perspective on the total scale of the fish trade that can be compared to the earlier data from the sixteenth century. For this reason, the data was added to the FTD and Chapter 4 contains an analysis of these records.

Additionally, Chapter 3 contains an overview of Ireland's medieval fisheries leading up to 1500. To facilitate that overview, several medieval primary sources were also utilised in this study. One of Ireland's lengthiest sources in the medieval periods are the Irish Chancery records that run intermittently from 1244 to 1509.⁹⁴ Similar to the State Papers, the Chancery records contain letters sent between English government officials. The Irish Chancery office was formalised after the Norman invasion in 1232 and used its own Irish seal to authenticate letters.⁹⁵ The original records were destroyed in 1922, but the Irish Manuscript Commission,

⁹² Hunter and Scott, *The Ulster Port Books, 1612-15*.

⁹³ Donald Woodward, "Irish Trade and Customs Statistics, 1614-1641", *Irish Economic and Social History* 26 (1999).

⁹⁴ The records have been collected and transcribed by the CIRCLE project at TCD, Peter Crooks, ed. *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509* (Dublin: Trinity College Dublin, 2019), <https://chancery.tcd.ie>.

⁹⁵ "The Irish Chancery Rolls, Introduction." (Trinity College Dublin, 2020) <https://chancery.tcd.ie/content/irish-chancery-rolls>. More detail about the history and structure of the series can be found at the link above.

fortunately, made Latin calendars of the originals in the nineteenth century.⁹⁶ A new English calendar has recently been produced by the *Calendar of Irish Chancery Letters c. 1244-1509* (CIRCLE) project at Trinity College Dublin.⁹⁷ The project reconstructed the records using the original calendars and supplementary material. These CIRCLE calendars were searched for references to the fisheries, and the results have been added to the QFD. These entries and what they tell us about the medieval fisheries will be discussed in the following chapter.

The sixteenth-century patent and close rolls were calendared by James Morrin in the 1860s, while an updated calendar of the Chancery fiants were published in 1994.⁹⁸ Another series of documents kept at the Chancery were the inquisition post mortem and on attainder and Margaret C. Griffith published an updated calendar of these records in 1991.⁹⁹ Almost all these Chancery records relate to the granting of lands, titles, offices and rights.¹⁰⁰ These sources do contain some records related to fisheries, but these mostly relate to the granting of riverine fishing rights. For this reason, this study focused on other sixteenth-century sources that had contained more information that specifically related to marine fisheries. However, these sources could contribute to a future study of river fisheries and the changing patterns of fishing rights during the sixteenth century.

The Irish Annals were also searched for relevant details concerning fisheries throughout the medieval and early modern period. The Annals were recorded in monasteries by Catholic monks; they provide an extensive documentary record of yearly events starting as early as the fourth century and continuing in some cases up to the seventeenth century.¹⁰¹ Recent research has demonstrated that instances of extreme weather and cosmic events reported in the Annals

⁹⁶ E. Tresham, ed. *Rotulorum Patentium Et Clausorum Cancellariae Hiberniae Calendarium* (Dublin: RCI, 1828).

⁹⁷ This project was headed by Professor Peter Crooks, Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*. Full details about how the reconstruction was achieved can be found here: <https://chancery.tcd.ie/content/reconstructing-rolls-medieval-irish-chancery>.

⁹⁸ James Morrin, ed. *Calendar of the patent and close Rolls of Chancery in Ireland, of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth*, vol. i (Dublin: Her Majesty's Stationery Office, 1861); *Calendar of the patent and close Rolls of Chancery in Ireland, from the 18th to the 45th of Queen Elizabeth* (Dublin: Her Majesty's Stationery Office, 1862); K. W. Nicholls, ed. *The Irish Fiants of the Tudor sovereigns: During the Reigns of Henry VIII, Edward VI, Philip & Mary, and Elizabeth I* (Dublin: Éamonn de Búrca for Edmund Burke, 1994).

⁹⁹ Margaret Griffith, ed. *Calendar of inquisitions formerly in the office of the Chief Remembrancer of the Exchequer prepared from the MSS of the Irish Record Commission* (Dublin: Stationery Office for the Irish Manuscripts Commission, 1991).

¹⁰⁰ Fiona Fitzsimons, "Tudor Fiants", *History Ireland*, July-August (2015), p. 25.

¹⁰¹ Francis Ludlow, "Interpretation of Celestial and Environmental Phenomena in the Irish Annals", *Atlas* 10 (2005); Francis Ludlow et al., "Medieval Irish Chronicles Reveal Persistent Volcanic Forcing of Severe Winter Cold Events, 431–1649 CE", *Environmental Research Letters* 8 (2013); Francis Ludlow, "Three Hundred Year of Weather Extremes from the Annals of Connacht", *Journal of Postgraduate Research* 5 (2006); "Tree Ring Chronology of Meteorological Extremes for Ireland, AD425-1650", *Irish Meteorological Society Newsletter* 5 (2011).

corresponded to real events verified through other sources.¹⁰² This research helps us to attest that the Annals were reporting on actual events. The Annals do not contain a vast amount of information concerning fisheries, but there are snippets that reveal more about the Gaelic Irish attitude toward fisheries and fish, particularly salmon. The translated and transcribed editions of the Annals that are available on the University of Corks *Corpus of Electronic Texts* website (CELT) were utilised in this study.¹⁰³

A range of other primary sources from the CELT collection were also searched for details concerning fisheries. These included the *Peyton and Desmond Surveys* that were conducted by English surveyors in the aftermath of the Desmond rebellions.¹⁰⁴ These surveys provide an invaluable snapshot of the physical fishing infrastructure of Desmond's land. Chapter 5 delves further into the origin of these surveys and presents a GIS analysis of the fishing sites in Desmond. Another CELT source utilised in this study is *The Genealogy of Corca Laidhe*, a genealogical and family history of the O'Driscoll family from Baltimore.¹⁰⁵ As we will see later in the thesis, this family history provides excellent detail about the O'Driscoll's fishing activity and their system for hosting foreign fishers.

The Bardic Poetry Database of Dr Katharine Simms and Dr Mícheál Hoyne was examined for references to fish, using the website's built-in search function.¹⁰⁶ Additionally, Dr Simms was contacted and provided several references to poems that discuss sea fishing. Dr Simms also noted that references to sea fishing are rare in Gaelic poetry, likely because fishers were of a low social class and not a typical subject for poets who focused on the ruling class.¹⁰⁷ The aristocracy also held contempt for agriculture and the merchant class and likely the nature of this disdain extended to fishers and fish sellers.¹⁰⁸ However, a common theme in Bardic poetry was praise for a landscape's fertility under a just ruler, and fish sometimes featured in these descriptions. For example, in a poem to Pilib Ó Raighilligh (d. 1596), the author describes 'Corn

¹⁰² Ludlow et al., "Medieval Irish Chronicles Reveal Persistent Volcanic Forcing of Severe Winter Cold Events, 431–1649 CE".

¹⁰³ "CELT: Corpus of Electronic Texts." (University College Cork, 1992-2020) <https://celt.ucc.ie/index.html>.

¹⁰⁴ John A. Murphy, ed. *The Desmond Survey, II The Peyton and Desmond Surveys* (Cork: CELT: Corpus of Electronic Texts, 2013), <https://celt.ucc.ie/published/E580000-001/index.html>.

¹⁰⁵ John O'Donovan initially compiled and translated the *Genealogy* for the Celtic Society of Ireland, John O'Donovan, ed. *Miscellany of the Celtic Society* (Dublin: The Celtic Society, 1849).

¹⁰⁶ Katharine Simms and Mícheál Hoyne, eds., *Bardic Poetry Database* (Dublin: Trinity College Dublin, 2010), <https://bardic.celt.dias.ie/>.

¹⁰⁷ From personal correspondence with Dr Simms. My thanks to her for providing her expert insight on this topic.

¹⁰⁸ Katharine Simms, "References to Landscape and Economy in Irish Bardic Poetry", in *Surveying Ireland's Past: Multidisciplinary Essays in Honour of Anngret Simms*, ed. H. B. Clark, Jacinta Prunty, and Mark Hennessy (Dublin: Geography Publications, 2004), pp. 156-157.

in the soil' and 'fish in the rivers'.¹⁰⁹ Unfortunately, references like this tell us little specific about fisheries but they do provide 'clues as to what the Gaelic Irish enjoyed and valued in their landscape'.¹¹⁰ Chapter Six also has a further discussion about what Gaelic poetry can tell us about the consumption of fish in the sixteenth century.

Several surviving corporation books from Irish towns were also searched for information about the fisheries. However, ultimately the corporation books yielded little of value to this study. Additionally, many towns only maintained these books from the seventeenth century onwards, which limited their usefulness.¹¹¹ However, among the surviving books, those for Dublin, Kilkenny, and Kinsale contained the most useful material and will be discussed at various points throughout this study.¹¹²

Overall, the reliance on printed material in this thesis does introduce an inherent bias toward English sources in this study, as we have relatively few written sources from the Irish perspective and those that do survive had little to say about the fisheries. However, there are ways to mitigate this discrepancy and gain a more complete understanding of the variety of fishing practices around the Irish coast. These methods will be discussed throughout the rest of the thesis. The main sources used here also introduce a regional bias; certain areas, such as the south-east coast, are represented far more in sources such as the Port Books and Customs Accounts. In part, this is because these regions were engaged in much international trade, but we also lack records for trade in other areas like the west and north coast. Other locations, like the River Bann, could be overrepresented in the State Papers because the area was highly contested and therefore generated a lot of written material. While we cannot fully overcome this regional bias, we can remain aware that a greater volume of material does not necessarily mean one location was more important than another.

¹⁰⁹ Ibid, p. 146.

¹¹⁰ Ibid, p. 146.

¹¹¹ These seventeenth century books were also fully searched and do contain a few details relevant to fisheries in later centuries, Brian Ó Dálaigh, *Corporation Book of Ennis* (Dublin: Irish Academic Press, 1990); Richard Caulfield, "The Council Book of the Corporation of the City of Cork : from 1609 to 1643, and from 1690 to 1800 / Ed. from the original, with annals and appendices compiled from public and private records" (Cork: Cork Corporation, 1876); *The Council Book of the Corporation of Youghal* (Surrey: Billing and Sons, 1878); Bríd McGrath, *The Minute Book of the Corporation of Clonmel, 1608-1649* (Dublin: Irish Manuscripts Commission, 2006); Robert M. Young, ed. *The Town Book of the Corporation of Belfast, 1613-1816* (Belfast: Marcus Ward & Co, 1892).

¹¹² John Ainsworth, "Corporation Book of the Irishtown of Kilkenny, 1537-1628", *Analecta Hibernica* 28 (1978); Henry F. Berry, "Minute Book of the Corporation of Dublin, Known as the "Friday Book", 1567-1611", *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 30 (1912/13); Richard Caulfield, ed. *The Council Book of the Corporation of Kinsale* (Guildford: Billing and Sons, 1870).

1.3 Scientific Sources

This study has aimed to bring together modern-day scientific information with historical data. Marine biology today can allow us to understand better the trends we find in historical information. As a result, some scientific language features in this study too. The nature of different fisheries is determined by the behaviour and biology of the species targeted. Aspects like habitat, life cycle and physiology dictate how and where fishers operate and additionally determine if a species is viable for commercial fisheries in the first place. Therefore, it is essential to understand the biology and behaviour of species targeted by fishers in the past. This section will outline some useful reference resources for understanding the biology of different species and provide a brief overview of fish migration patterns.

The Marine Institute of Ireland now provides an online *Species Dashboard* containing fundamental facts about marine species found in Irish waters.¹¹³ Essential reference information, such as the common length and distribution of species, can be found on this website. Moreover, the Marine Institute provides detailed data on the average weight of fish, which was vital to the quantitative analysis in this thesis. The use of this data will be explored later in this chapter. The Marine Institute also offers information on Ireland's modern fisheries that can provide a valuable perspective on historical fisheries.¹¹⁴ The website, FishBase.org, is yet another important reference source for biological information on fish.¹¹⁵ The information on FishBase is less specific to Ireland, but its global database contains data on a wider variety of marine and freshwater species.

Every species of fish has both a common name and a scientific name. Scientific names are useful due to the lack of ambiguity, as several different species of fish may have the same common name. This thesis will provide the scientific name of each species in brackets the first time it is mentioned in relation to Irish fisheries; subsequent mentions of that species will use the common name. The first mention of each species will also contain a link to a web page with further biological background information from the sources discussed above.

As will become apparent throughout this thesis, the life cycles of fish significantly impacted the nature of fisheries in sixteenth-century Ireland. The spawning locations and behaviours of individual species will be discussed throughout the thesis, and Figure 1.4 provides a good summary of the typical life cycle and migration pattern of fish. Typically, adult fish that are ready

¹¹³ "Species Dashboard." (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

¹¹⁴ "The Stock Book.", (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/stockbook/>; See too, "Ireland's Marine Atlas." (Marine Institute of Ireland, <http://atlas.marine.ie/#?c=53.9108:-15.9082:6>).

¹¹⁵ R. Froese and D. Pauly, "FishBase." (World Wide Web electronic publication., 2019) www.fishbase.org, version (12/2019).

to spawn move to and from their spawning grounds, while the larval forms of fish move from spawning grounds to nursery areas where they feed and grow before joining adult populations.¹¹⁶ The process of fish moving from their juvenile to adult stage is known as recruitment. Most fisheries in the sixteenth century were seasonal, targeting species during the time of the year they came into shallow waters to their spawning and nursery areas.¹¹⁷ For this reason, they were highly dependent on the regularity of fish migration and life cycles. The implications this had for fisheries targeting species like herring, cod, hake (*Merluccius merluccius*)¹¹⁸, and salmon will be discussed throughout this thesis in conjunction with other scientific literature.

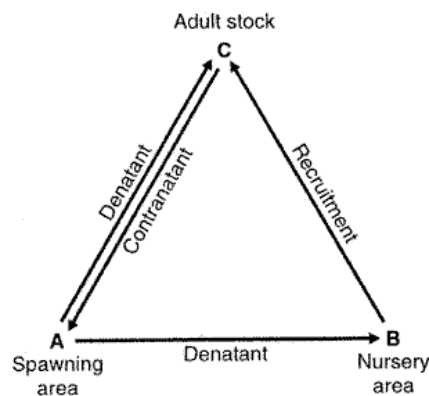


Figure 1.4 - Typical scheme of life history migrations.¹¹⁹

1.4 Qualitative Analysis

As outlined above, there exists a wide array of qualitative sources related to sixteenth-century fisheries. However, this material is spread throughout more extensive collections of sources. The corpus of primary sources collected for this study contains 90 documents and over 11 million words. Given this scale, it would be nearly impossible to locate all entries relevant to fisheries using manual means. Instead, the methods used here were developed to discover and collect all relevant material to fishing from this extensive collection.

The basis of the method used in this work is a process known as Qualitative Data Analysis (QDA). A programme called MaxQDA was used to do the QDA analysis in this research. This

¹¹⁶ From, J. F. Caddy, "Zoogeographical Categories Relevant to Fisheries Management in the Mediterranean", *Studies and Reviews - General Fisheries Council for the Mediterranean* (FAO) 70 (1998).

¹¹⁷ Alison Mary Locker, "The Role of Stored Fish in England 900-1750AD; the Evidence from Historical and Archaeological Data" (PhD diss., University of Southampton, 2000), p. 34.

¹¹⁸ "Species Dashboard, Hake (*Merluccius merluccius*).", (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

¹¹⁹ From, J. F. Caddy, "Zoogeographical Categories Relevant to Fisheries Management in the Mediterranean", *Studies and Reviews - General Fisheries Council for the Mediterranean* (FAO) 70 (1998).

software allows for the large-scale searching and coding of textual and multimedia sources. It also provides several options for analysis and the visualisation of results.¹²⁰ Ultimately, QDA methods work to focus 'one's attention on condensed topics most relevant to the research questions'.¹²¹ This type of analysis uses 'codes' to systematically collect and apply meaning to segments of text. In a priori QDA approach, codes are determined prior to data collection, while in a more exploratory approach, codes are 'continually refined as inductive codes are developed and applied to more data'.¹²² The latter approach was taken in the current study.

This thesis's initial methodology was inspired by Robert M. Schwartz's analysis of the British Parliamentary reports on sea fisheries.¹²³ Schwartz used a variety of digital methods to analyse and visualise these reports and provided a broad picture of how fisheries fared in late nineteenth-century Britain. For example, Schwartz performed a QDA analysis on interviews with fishers and applied codes to reflect how positively or pessimistically the fishers perceived fisheries in their area. The results were then mapped to provide a spatial overview of fishers' perceptions across the UK.¹²⁴

The first step of the QDA process is using optical character recognition software to make texts machine-readable. This process allows us to search texts using keywords, then apply codes to relevant segments.¹²⁵ The keywords used in this study were developed and refined to ensure all entries relating to fishing activity were found within the sources. The records were also searched for records relating to piracy, as it had a major disrupting impact on fisheries in the sixteenth century, particularly in the 1590s. Chapter 5, Section 5.3 discusses this impact further. Records discussing the impact of extreme weather on fisheries and shipping were searched for too, but this data was not ultimately used in the current study. However, Chapter 6, Section 6.3.3 does have a brief discussion of extreme weather events and their impact on fisheries in the early seventeenth century. Keywords were chosen through the close reading of the primary sources and were improved overtime to ensure all relevant entries were found. For example, common alternative spellings of words were included to increase the accuracy of the search.¹²⁶ The final search string of 57 keywords is listed in the introduction to Appendix 1 found in the

¹²⁰ MaxQDA 2020 by VERBI Software (<https://www.maxqda.com/>).

¹²¹ Paul Mihalas, "Qualitative Data Analysis" (Oxford University Press, 2019), p. 2.

¹²² *Ibid.*, p. 2.

¹²³ Robert M. Schwartz, "Digital Partnership: Combining Text Mining and GIS in a Spatial History of Sea Fishing in the United Kingdom, 1860 to 1900", *International Journal of Humanities and Arts Computing* 9, no. 1 (2015).

¹²⁴ *Ibid.*, p. 48.

¹²⁵ ABBY FineReader was the OCR software used in this study (<https://www.abbyy.com/en-eu/finereader/>).

¹²⁶ The accuracy was further increased by including common OCR transcription errors in the search strings.

online data appendices.¹²⁷ The accuracy of keyword searchers was also verified using spot checks and existing indexes.

After the relevant entries were found, they were then coded into different categories using the MaxQDA software. This software contains its own tools for analysing and visualising these codes, but these were too limited for the current study's goals. Instead, this study uses a custom relation database (the QFD) and other external software to organise and analyse the entries found using MaxQDA. Microsoft Access was the software chosen to build databases in this study due to its user-friendly and intuitive approach to database design that does not require extensive coding knowledge.¹²⁸ A relational database structure was chosen because it allows for the linking of records between multiple sheets, and this offers a much more flexible structure than if the same data was entered into a single spreadsheet. The database structure is also flexible and allows additional tables to be added over time without reorganising the entire structure. The flexibility of relational databases was vital to this study, as additional sources and types of information were added to the database throughout the research process.

The first version of QFD was designed to record only instances of piracy found in the primary sources. The database documented vital details related to each piracy event, such as the date, attacker, victim, and location. Extreme weather events were added to the database next, with different details, such as the strength and damage caused.¹²⁹ Finally, the database was extended to include a range of details about fishing operations; this aspect of the database is the most complex and extensive. The structure of the whole database can be seen in Figure 1.5 on the next page.¹³⁰ The database works on a hierarchical basis, with the *Voyage* sheet being the highest level of record. Each voyage record connects to an 'event sheet', such as *Piracy Events*, *Extreme Weather Events* and *Fishing Mentions*. All the sheets are linked together through a central QFD Identification number (The 'QFD ID'). This QFD ID number is unique to each record and has been included in any footnotes relating to entries from the database.

¹²⁷ For the associated data appendices see, <http://hdl.handle.net/2262/96098>.

¹²⁸ Microsoft Access 2019, Microsoft Corporation (<https://products.office.com/en-ie/access>). Some knowledge of SQL is useful in the design of complex queries, however.

¹²⁹ As mentioned, the data collected on extreme weather events was not used in the final study.

¹³⁰ This version of the database contains many redundant fields that were removed and cleaned up in the final dataset found at, <http://hdl.handle.net/2262/96098>.

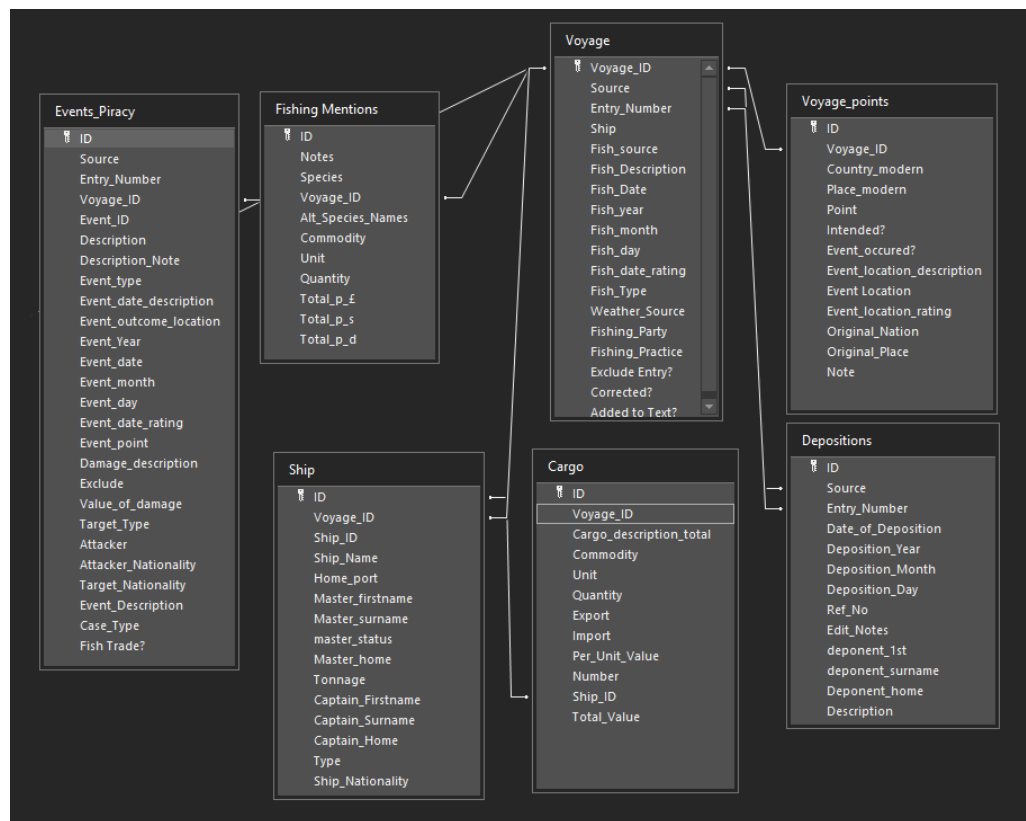


Figure 1.5 – Qualitative Fishing Database Structure.

Figure 1.6 on the next page provides details on the full procedure for processing and entering information into the database. The first four steps to locate texts, translate them into a machine-readable format, search and code them in MaxQDA have already been described. The next step is to enter information found in the sources into the database using a custom data entry form. Information entered using this form creates a new record that relates to a specific event or type of data. Different types of information are sorted using a system of categorisation. Following data entry, the records can then be queried for analysis. A data query is a process by which relevant information is requested from the database for further analysis in other software, such as Microsoft Excel.¹³¹ Finally, the results of this analysis can be discussed in the thesis and visualised using several other methods.

¹³¹ Microsoft Excel 2019 by Microsoft Corporation (<https://products.office.com/en-ie/excel>).

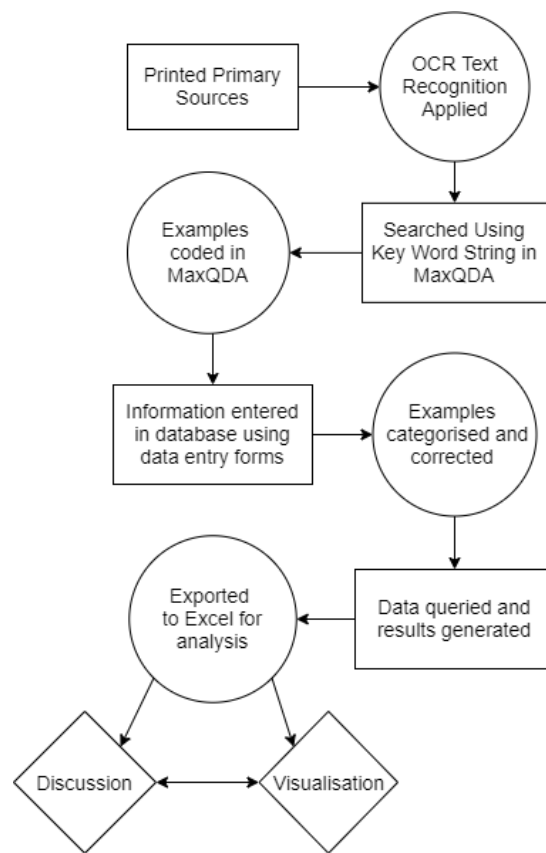


Figure 1.6 – QFD data entry process.

Figure 1.7, over the page, is an image that shows part of the data entry form mentioned above. The full form is more extensive and links together the most important details related to each entry in one window. The form is not meant to be used by the general reader as it is challenging to follow, but it is a useful data entry tool.

Ensuring the accuracy and reliability of data were key concerns in this work. Turning qualitative information into definite data points can be challenging as historical data is often not definite, can be open to interpretation, or is vague and incomplete. This level of inaccuracy is particularly true in relation to dates, with some dates in the sources being of higher exactness than others. In order to track the accuracy of dates, a three-point scale was introduced to rank them based on reliability. This method also allows us to filter out those dates with the lowest accuracy rating and quickly sort events based on the reliability of the dates in question. A score of one was applied to dates with low accuracy; this might be a record generated from a letter without an exact date and only the year it was sent. A score of two was applied to records with middling accuracy. These might be letters that list the exact day the letter was sent but contain no mention of when events took place. Often it can be unclear how long before a letter was written

that a given event occurred, so the most accurate rating of three was reserved for records that discuss the specific day events happened.

Voyage_ID_Voyage	769	Fish_source	Calendar of Carew Manuscripts 1515-1574
Voyage_ID	769	Fish_Type	Fishing Location
Entry_Number_Voyage	70	Added to Text?	
Fish_Description	The Treasurer of late Wa8 at Carlingford to see the King's castle there, and another called the Green Ca8tle; which c8\stles and the country about them are almost destroyed. The English fleet WB8 there at their herring fishing, and were 600 suil. They offered, if there were any war in those parts, to mil.ke three thousand fighting men for two or tliree days. If the fishing continue there a8 it has done, the King may have as much l'l'nt as ever was paid, and the residue of the profit3 will, within a short time, moke both the castle of l'arlingford and the Green Castle to be wardable. Ifthe King continue his wars, as of necessity il must be, it were convenient to send oyer 100 masons, carpenters, and sawyers, who might be men of war, and ahlo make and repair castles and fmiresses borde'l'ing on the King's to be wardable, and do good service in making of piles.	Notes	Very interesting one with an important detail about the size of the fishery, also the involvement of the fishery in conflict in Ireland and a clue to how they might interact. Also note the date, this fits the import and spawning periods.
Fish_Date	31 Dec 1535	Fishing_Practice	English
Fish_year	1535	Fish_date_rating	2
Fish_month	12	Alt_Species_Names	
Fish_day	21	Unit	boats
Species	herring	Total_p_d	0
Commodity	Number of Boats		
Quantity	600		
Total_p_E	0		
Total_p_S	0		

Figure 1.7 – QFD Fishing Information Entry Form.

When information from the State Papers and other sources was entered into the database using the entry form, it was placed into several different categories and subcategories for further analysis. For example, we might have a letter in the State Papers that mentions herring fishing taking place at Waterford and a barrel of herring costing 14s in the town. In this case, a record would be generated under the *Fishing Location* category, with a *Fishing Towns* subcategory. The species (herring), location (Waterford), and date the letter was sent would also be recorded. Additionally, a second entry would be generated under the Fish Price category; this would list much of the same information, such as the species and date, but would also record the unit of fish used (barrel) and the cost of that unit (14s.). This example is an important illustration that one letter can generate several records in the database. Following the categorisation of all the records, a full list of data points relating to topics like fishing locations or prices can be generated quickly for further analysis. Table 1.1 on the next page shows a summary and description of the categories and their respective subcategories within the database.

Main Category	Subcategory and Description of Main Category
Fishing Art	Entries where fish are used artistically, non-literally, i.e., metaphors.
Fishing Customs	Entries about customs and practices around fishing, such as methods or organisation.
	Fishing Unit
	Fishing Politics
	Fishing Methods
	General Description
	Fishing Organisation
	Fish Tax
	Fishing Licence / Grant
	Fishing Markets
	Fishing Income
Fishing Location	Entries that mention fishing take place at a location.
	Sea Fishing
	River Fishing
	Lake Fishing
Fish Trade	Entries that relate to the trade of fish.
	Fish Export
	Fish Import
	Internal Trade
Fishing Voyage	Entries that relate to voyages undertaken for fishing, i.e., distant fisheries.
	Foreign Fishing Voyage
	Newfoundland
	External Fishing Voyage
	Internal Fishing Voyage
Fishing Damage	Entries that relate to fishing being damaged or put in danger.
	Weather
	Piracy
	Confiscation
	Conflict
	Protecting Fisheries
	Wrecked
	Pollution

	Disease
Fish Consumption	Entries that relate to the consumption of fish.
	Food Shortage
	Army Consumption
	Naval Consumption
	Labourers Consumption
	Plantation Consumption
	Fisher Consumption
	Elite Consumption
Marine Mammals	Entries related to marine mammals.
	Whales
Fish Price	Entries that relate to the price of fish.
Fisheries Control	Entries that relate to the control and plantation of fishing colonies
	Plantation Plans
	Fishing Propaganda
	Foreign Fishing General
	Plantation Operations
	Anger Over Plantation

Table 1.1 – QFD Categories and Subcategories.

Where available, a ‘Fishing Party’ tag was also assigned to entries; this denotes the nationality or background of the fishers or other actors in the record. For example, we might have a record stating that Spanish fishers were seen fishing in Baltimore. In this case, the main category would be *Fishing Location* and the *Fishing Party* would be Spanish. Ultimately, the categorisation of records allows for many types of analysis and quick recall. For example, based on the assembled data, we can pull out all records that relate to Spanish fishing locations between the years 1500 to 1575. The data generated from this query can then be used to plot a map of these locations. Similar queries can be written to extract records fitting any criteria, such as fishing voyages or fish consumption by the English army. In this way, the database can be used both to generate quantitative data, like maps of fishing locations or lists of prices, and to find examples for qualitative discussions.

The mapping of database entries is made possible because every location mentioned in both databases was added to a central gazetteer. This gazetteer contains the geographic coordinates of these locations, which allows them to be mapped out using Geographic Information Systems (GIS) software. The full gazetteer, with 590 geolocated place names, is

listed in Appendix 4 in the online data appendices.¹³² Section 1.6 of this chapter also contains a more detailed breakdown of the GIS methods employed in this research.

The methods described here could be criticised as being reductive, and, in some ways, they are. However, these methods have not replaced close readings of the primary texts or traditional qualitative analysis; those approaches are still a vital part of this thesis. Within this work, the context around individual entries and the broader historical trends at play have been considered in detail. The following chapters will illustrate the benefits of using databases for historical investigations. Databases allow for detailed note-keeping and for organising records that enhance qualitative discussions.

Moreover, the thorough quantification of qualitative information can allow us to identify and understand trends in sources that would not be visible through qualitative analysis alone. The fully cleaned and refined data related to fisheries from the QFD can be found in Appendix 1 of the online data appendices, while piracy related entries can be found in Appendix 2.¹³³ The introduction to these appendices also includes a full explanation for all the column headings and sources used.

1.5 Quantitative Analysis

The other main type of information used in this study is numeric, quantitative information. This type of information provides us with the best chance of understanding the extent of ocean extractions in the past and gauging the scale of fisheries. Before discussing the methods used to process historical data, it is useful to discuss why quantitative information is vital to modern fisheries. Today fishery statistics are essential to understand the health and sustainability of fisheries over time, as well as to gauge the impact of humans on fish populations. Knowing how much fish is being extracted allows fishery managers to set quotas and track changes in the biomass of different stocks. Additionally, comprehending the level of extractions allows regulating bodies like the European Union (EU) to share fishing resources between nations. Like any natural resource, fish has economic and political significance, and can thus create conflict between competing parties. For example, the sharing of fisheries in Ireland and the

¹³² Data hosted online at, <http://hdl.handle.net/2262/96098>.

¹³³ Ibid.

United Kingdom remains a contentious issue, especially after the United Kingdom's vote to leave the EU in 2016.¹³⁴

Quantitative information from the past is an integral part of understanding our long-term impact on aquatic environments. Historical data, especially that from the sixteenth and seventeenth centuries, is not going to form part of a modern stock assessment model, but it can illustrate longer-term trends in the extraction of fish from our oceans. Additionally, quantitative information from trade records and other sources is our best way of understanding the economic value of fishing industries from the past. No study to date has pulled together the available quantitative records relating to Ireland's sixteenth-century fisheries. This is in part because no detailed catch or landing records have survived for Ireland from the period. Moreover, as discussed earlier, records of exports from Ireland have also not survived, but we do have trade data from ports in England and Wales that can tell us much about the export of fish from Ireland. By combining data from a variety of quantitative sources into one central database, the FTD, we can begin to understand broader trends in Ireland's export trade of fish in the sixteenth century.

The database uses a standard set of field names to amalgamate different sources and render them comparable. While the quality of the sources used in the database differs, most contain common core pieces of information, such as the name and home port of the ship, the shipmasters name, and sometimes the origin and destination of the ship. Often, they only record what port the ship is entering or leaving. Commonly, the goods carried are recorded and the merchant responsible for those goods. The hometown of the master and merchants is frequently reported too. In the absence of other information, these details can be used to estimate the origin or destination of the ship.

As mentioned earlier, the initial framework of the FTD was based on the sixteenth-century Bristol trade dataset of Jones and Flavin.¹³⁵ Many of the same data field names were initially employed in the FTD, but over time, additional fields were added to accommodate different sources and pieces of information. Like the QFD, the FTD is a relational database and was built within Microsoft Access. The structure of the database can be seen in Figure 1.8 over the page.¹³⁶ The database comprises two central sheets: The *Main Reference* sheet and the

¹³⁴ Simon Carswell, "State on Watch to Protect Sea Borders Amid Brexit Fears for Fishing", *The Irish Times*, 30 Sept 2019; "Fisheries Dispute Breaks out Between Ireland and Scotland", *RTE News*, 8 June 2019.

¹³⁵ Jones and Flavin, *Bristol's Trade with Ireland and the Continent, 1503-1601: the Evidence of the Exchequer Customs Accounts*.

¹³⁶ Once again, the final data release has been simplified and cleaned from this version hosted online at, <http://hdl.handle.net/2262/96098>.

Commodities and Merchant sheet. The *Main Reference* sheet records details about each cargo ship, its tonnage, master, homeport, and origin. This sheet also clearly indicates the original authors and source of the data that has been combined here. The *Commodities and Merchants* sheet then records all details about the cargo carried by ships and the responsible merchants. Further to the two central sheets is the *Sources* sheet, which records more detailed information regarding the original sources. Finally, the *Fish Conversions* sheet contains the details necessary to convert every unit of fish mentioned in the original sources into one standard measure of volume, Tonnes Live Weight (TLW).

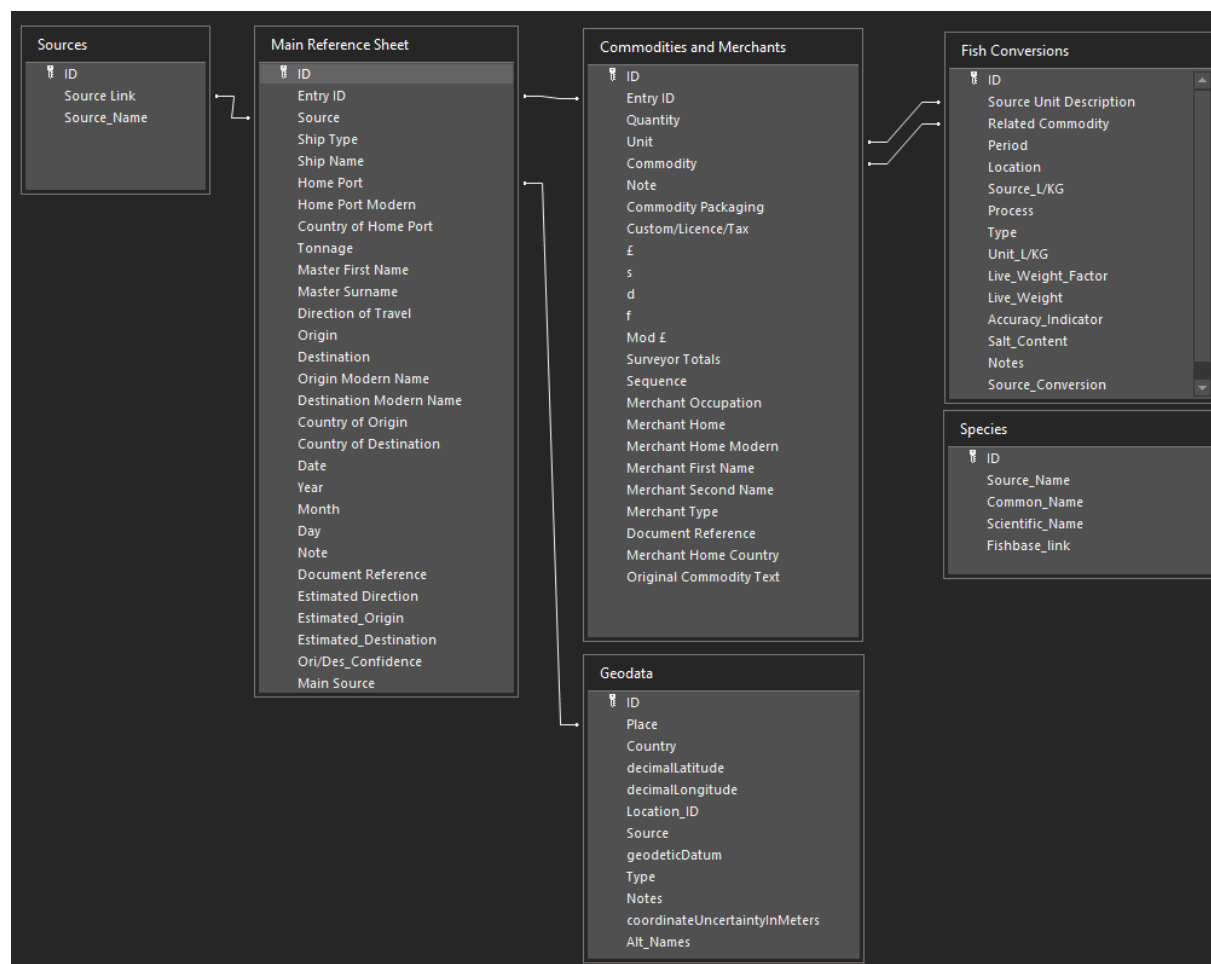


Figure 1.8 – Structure of Fish Trade Database.

This conversion of historical units to TLW is a core part of the database. The reason for converting fish in this way is to establish a single standard measure; this then allows us to compare volumes of traded fish between sources and time periods. Doing so also allows us to compare our historical records to modern information and records from other historical periods. Modern fisheries' statistics are calculated by weighing fish on board ships or upon its landing at port. Fish is generally weighed in a processed state, so to calculate the live weight, a

conversion factor is applied.¹³⁷ The conversion factors used are specific to the type of fish product that is being weighed, but the common goal of these conversions is to estimate the weight of fish while it was alive. Within the EU, conversion factors are regulated through the Common Fisheries Policy.¹³⁸ Other institutions, such as the Food and Agriculture Organisation of the United Nations (FAO), provide their own conversion factors.¹³⁹

To work out the TLW we first need to know the live weight of each individual unit of fish. Then to reach the final TLW figures we multiply the number of each unit by its calculated live weight.¹⁴⁰ These live weight calculations work by either knowing the volume of a historical unit or the number of individual fish contained in that unit. This thesis builds on existing work done by scholars, such as Jones and Flavin, on historical units, but further research was conducted to attain the most accurate estimates for units of fish.¹⁴¹ For example, in the case of the Bristol records, seven different units were used to transport herring from Ireland (different units were used for other fish). The most common unit used for both white and red herring was the barrel. It is important to note these are the same species; white herring were salted, while red herring were salted and smoked.¹⁴² However, the difference in processing method means unique live weight conversion methods are required. We know from a letter sent by Henry Wallop to William Cecil in 1583 that an Irish white herring barrel contained 900 fish.¹⁴³ We can then combine this with data from the Marine Institute of Ireland that relates to the average weight of herring in Irish water. Fishers in the sixteenth century targeted herring on their spawning grounds so they would have caught a greater portion of sexually mature fish, hence herring under the age of three years were excluded from the average used here.¹⁴⁴ The average weight of herring older than three years of age is 175.36 grams (g).¹⁴⁵ Given these details, the final calculation works as such,

¹³⁷ "Aquaculture Production in Tonnes and Value." (European Commission, Eurostat, 2019) <https://ec.europa.eu/eurostat/web/products-datasets/-/tag00075>.

¹³⁸ Amitav Ghosh, *The Hungry Tide* (London: HarperCollins, 2004).

¹³⁹ Food and Agriculture Organization of the United Nations, "Indicative Factors for Converting Product Weight to Live Weight for a Selection of Major Fishery Commodities" (Coordinating Working Party on Fishery Statistics, 2020).

¹⁴⁰ Chapter 4 will analyse the final TLW data.

¹⁴¹ See for example, Susan Flavin and Evan Jones, "A Glossary of Commodities, Weights and Measures Found in the Sixteenth-Century Bristol Customs Accounts" (2009); Evan Jones, "Tonnage Estimates of Goods Recorded in the Bristol 'Particular' Customs Accounts: 1465/6, 1485/6, 1503/4.", *University of Bristol* (2017).

¹⁴² Mary Locker, "The Role of Stored Fish in England 900-1750AD; the Evidence from Historical and Archaeological Data", pp. 43-44; Charles L. Cutting, *Fish Saving* (London: L. Hill, 1955), p. 76.

¹⁴³ Wallop to Burghley, 13 Jan 1583, SP 63/99 f.40, QFD ID 1024.

¹⁴⁴ "Clupea harengus Linnaeus, 1758 Atlantic herring." (Fishbase.org, 2020) <https://www.fishbase.org/summary/Clupea-harengus.html>.

¹⁴⁵ Herring Live Weight Data from "Species Dashboard, Herring", <https://shiny.marine.ie/speciesdash/>.

$$1 \text{ Barrel White Herring} = 900 \text{ fish} * 175.36g =$$

$$157.83kg \text{ Live Weight Herring}$$

This method gives us the live weight of a white herring barrel. However, as mentioned, the alternative method to reach live weight is to use the volume of the unit. In the case of herring, a statute from 1451 mentions that a herring barrel in Bristol was meant to be 30 gallons or 113.562 litres (L) in volume.¹⁴⁶ For the purpose of our calculations, we assume that herring had the same density as water, so a barrel with a volume of 113.56L would contain 113.56 kilograms (kg) of herring. To convert this processed weight to live weight, we then use the modern conversion factors from the FAO. For salted white herring, the conversion factor is 1.39.¹⁴⁷ Again, given these details, the final calculation in this example is as follows,¹⁴⁸

$$1 \text{ Barrel White Herring} = 113.56kg * 1.39 =$$

$$157.85kg \text{ Live Weight Herring}$$

Encouragingly, in the case of white herring, the calculations using the number of fish, and the calculation using the volume are both 157.8kg. The similar result between both methods suggests the information used in both is accurate. Similar calculations were done for every species and cure of fish found in the sources. For example, Evan Jones has estimated that a barrel of red herring contained 800 fish, so to determine the live weight, we multiply 800 by the average weight of a herring from the Marine Institute.¹⁴⁹ In the case of hake, the fish were commonly shipped by the long hundred (C) (containing 120 fish).¹⁵⁰ So, to establish the live weight, we multiply 120 by the average weight of a hake, which the Marine Institute data records as 1.363kg.¹⁵¹ The calculation works like this,

$$1 \text{ C Hake} = 120 * 1.363kg =$$

$$163.56kg \text{ Live Weight Hake}$$

The estimates discussed so far have all been based on modern data, but there is an argument to be made against using modern measurements when studying historical fisheries.

¹⁴⁶ Statute made in Bristol in 1451, *The Great Red Book of Bristol, Vol. IV (Part I)*, (Bristol: Bristol Record Society, 1933), p. 134.

¹⁴⁷ Nations, "Indicative Factors for Converting Product Weight to Live Weight for a Selection of Major Fishery Commodities".

¹⁴⁸ Within this study '*' is the notation for multiplication.

¹⁴⁹ $800 * 175.36g = 140.3kg$.

¹⁵⁰ Flavin and Jones, "A Glossary of Commodities, Weights and Measures Found in the Sixteenth-Century Bristol Customs Accounts", p. 32.

¹⁵¹ Hake Live Weight Data, from "Species Dashboard, Hake (*Merluccius merluccius*)", <https://shiny.marine.ie/speciesdash/>.

Researchers have shown that many species of fish were on average larger in pre-industrial times.¹⁵² For example, James Barret observes that the archaeological remains of cod found on Orkney from the 11th and 12th centuries indicated an average fish size of > 80 cm. Remains from 11-13th century York indicated an average size of between 50 and 80 cm. In contrast, modern estimates of cod from the North Sea range between 15 to 30 cm, far below the historical estimates.

However, Barret states that 'one must exercise caution when interpreting archaeological fish size evidence'.¹⁵³ This is because fish size may also relate to other social and economic factors that are unrelated to the characteristics of the fish population itself. Barret also outlines that the most convincing evidence for a reduction over time in fish size comes from freshwater species, while the evidence from marine species is more ambiguous and open to interpretation.¹⁵⁴ Additionally, within marine species, the evidence for a reduction in the size of large fish, such as cod, is more extensive than that for smaller species such as herring. Finally, there are currently no studies that have specifically studied the historical size of fish in Irish waters.

For these reasons, the current study used modern data from the Marine Institute of Ireland to estimate the size of herring and several other species. However, the Marine Institute provides no modern data for cod, and as stated, the evidence for a change in the average size of cod over time is far more robust than other species. Consequently, the current study uses Barbara Harvey's historical estimate for the weight of cod in medieval England. Harvey studied the diets of medieval English monks and estimated that cod weighed 2.996kg per fish at the beginning of the sixteenth century. Harvey also provides an estimate of herring, that is only marginally higher than the estimate for herring used in this study.¹⁵⁵

Moving on from the live weight calculations, existing printed and digitised sources were chosen for this study of the fish trade to maximise the amount of relevant data that could be collected and analysed. It is important to note that the data assembled is far from a perfect time series due to its many temporal and spatial gaps. There are undoubtedly other records that could help fill these gaps; some have been printed, and much else remains in manuscript form. However, this work has succeeded in assembling data from a variety of ports that traded heavily with

¹⁵² James H. Barrett, "An environmental (pre)history of European fishing: past and future archaeological contributions to sustainable fisheries." *Journal of Fish Biology* 94, no. 6 (2019): 1033-44., p. 1037.

¹⁵³ *Ibid.*, p. 1037.

¹⁵⁴ *Ibid.*, p. 1038.

¹⁵⁵ Barbara F. Harvey, *Living and dying in England, 1100-1540 the monastic experience* (Oxford: Clarendon Press, 2002), Table A. Messes of Fish in the Refectory at Westminster Abbey, c. 1495-1525. This conversion is listed beside 'Fish, Salted' in the data appendices, as cod was rarely called 'cod' in the trade sources.

Ireland and cohesively combining this disparate data. Moreover, the live weight conversions performed here allow us to comprehend the number of fish extracted from Irish waters in this period and compare volumes between sources. Overall, the combination of information from multiple sources in a database like this allows us to see and understand patterns that would be otherwise indiscernible if examining these sources in isolation.

A cleaned and refined version of the data from the QFD can be found in Appendix 3 of the online data appendices.¹⁵⁶ The online data also contains a complete list of the utilised sources and live weight conversion factors, along with the sources and methods used to reach the final figures. There is also a full explanation for each column heading included in the dataset. Finally, Chapter 4 will explore what this data can tell us about the major trends in Ireland's fish trade in the fifteenth and sixteenth centuries.

1.6 Visual Sources Analysis

This work also makes extensive use of visual sources and data visualisation methods. This section will provide a brief history of the cartography of Ireland up to the seventeenth century and discuss some examples of maps from the study period. It will then discuss methods used here to generate custom maps which visualise results from the qualitative and quantitative evidence base.

Almost all maps of Ireland from the medieval and early modern period were made by people not native to the island and must be considered in that context. The earliest representation of Ireland can be found in a map based on coordinates collected by Greek geographer Ptolemy from 150 A.D. In this map, eastern side of Ireland is marked with a greater density of features, suggesting that sailors and mariners (who were Ptolemy's primary sources) were more familiar with this coast.¹⁵⁷ Maps were also made of Ireland during the medieval period, such as that by Giraldus Cambrensis in 1200.¹⁵⁸ That said, these maps were not accurate representations but rather literary interpretations of the island and its features. However, from the fourteenth century onwards, Italian, and Catalan cartographers began to create more practical maps of Ireland. The purpose of these maps was to navigate at sea; they were plotted using compass bearings

¹⁵⁶ Data hosted online at, <http://hdl.handle.net/2262/96098>.

¹⁵⁷ *Ireland from Maps*, Introduction p. 2; Cladius Ptolemaeus, "Ireland circa 150 A.D.", 150 A.D., in *Ireland from Maps* (Dublin: The National Library of Ireland), Map no. 1.

¹⁵⁸ Giraldus Cambrensis, "Europe, Topographia Hibernica", 1200 A.D. (Dublin: Manuscript 700 The National Library of Ireland), in Andrews, *Ireland from Maps*, Map no. 2.

and estimates of the distance between ports. For this reason, they were called 'portolans' in English.¹⁵⁹

These maps show a similar trend found in Ptolemy's work; the east and south coasts were drawn in greater detail, suggesting again that mariners were more familiar with these regions.¹⁶⁰ This would seem to make sense as most of the important Norman trading ports were located on the east and south coasts.¹⁶¹ The Tudor re-conquest of Ireland brought a whole new phase of map-making to the island. Many of these maps were made by English cartographers who followed military forces through Ireland. These maps were tools of conquest used for planning, allotting land, surveying resources, and establishing control.¹⁶²

The Tudor and Stuart maps of Ireland contain a wealth of detail we can use in the study of fisheries and maritime history. Several maps contain direct illustrations of fishing taking place which provide some of our only visual sources for how differently fishing vessels and gears looked and operated. These images will be fully explored in later chapters. The maps also provide details about harbours, ports and landing places employed by fishers and traders. The maps additionally indicate the marine resources in which the English colonists were interested and the coastal areas they sought to control. Moreover, while these maps were drawn from the English perspective, they provide us with details on every day and practical aspects of fisheries at the time.

In addition to the English-made maps, English sources passed cartographic knowledge to continental map makers who produced more lavish and complete maps of Ireland for publication. One of the earliest and most accurate of these maps was produced by Gerard Mercator and released in 1564, which can be seen on the next page (Map 1.1). Mercator's map was a milestone in Irish cartography due to its relative accuracy and level of detail.¹⁶³ Contemporary sources tell us that Mercator did not draw the map but was sent it by a friend to have it engraved. Speculation continues among historians as to the identity of this friend.¹⁶⁴

¹⁵⁹ *Ireland from Maps*, Introduction p. 3.

¹⁶⁰ Thomas Johnson Westropp, "Early Italian Maps of Ireland from 1300 to 1600, with Notes on Foreign Settlers and Trade", *History, Linguistics, Literature* 30 (1912).

¹⁶¹ *Ibid.*

¹⁶² The major collections of Tudor and Stuart maps used in this study were already described earlier.

¹⁶³ Andrews, *Ireland from Maps*, Introduction, p. 5.

¹⁶⁴ *Shapes of Ireland, Maps and their Makers 1564-1839* (Dublin: Geography Publications, 1997), p. 41.



Map 1.1 – Gerard Mercator Map of Ireland, 1564.¹⁶⁵

As well as using historical maps as sources, this study also makes use of modern GIS and cartography methods to visualise results collected from documentary sources. A GIS system is a software package designed to capture, store, analyse, manipulate, and publish geographic data.¹⁶⁶ The two principal GIS software packages used in this study are ArcGIS, produced by

¹⁶⁵ Gerard Mercator, "Ireland, from Angliae, Scotiae et Hiberniae Nova Description", 1564 (Duisburg) in Andrews, *Ireland from Maps*, Map no. 4.

¹⁶⁶ Ian N. Gregory and Richard G. Healey, "Historical GIS: Structuring, Mapping and Analysing Geographies of the Past", *Progress in Human Geography* 31, no. 5 (2016).

ESRI, and QGIS, an open-source GIS package.¹⁶⁷ Adobe Photoshop and Illustrator were used to do post-processing and cartographic design of maps.¹⁶⁸

Historical GIS aims to use historical data and maps in conjunction with modern GIS methods and software. Historians have debated if historical GIS is a subfield of history or merely a tool for adding visual elements to other historical fields.¹⁶⁹ In the current study, GIS methods are used to analyse spatial sources like maps, and also to make original maps that represent data from the two central databases. In this sense, the current study uses GIS more like a tool. However, this is a vital tool to understand spatial patterns in the fishers that would otherwise go unnoticed. For example, GIS also allows us to map out fishing sites and then trace changes in spatial distribution and ownership of these sites over time. As mentioned earlier, GIS methods also link directly to the two databases used in this research, as any location mentioned in those databases was added to the central gazetteer of geolocated place names.

Several types of GIS visualisations were also used in this study. Extensive use of point maps was made to visualise features like fishing locations changing over time. Graph maps were also used to indicate percentages and volumes of fish exports. Route maps were employed to show connections between different locations. All three of these types were combined on a variety of maps. A custom made 'base map' of Ireland was also designed for this study. This base map uses a digital elevation model and bathymetry data to make a map that represents the land and seascape of Ireland without modern features that would interfere with the historical period under study.¹⁷⁰

The process of making custom maps in this thesis followed a set procedure. Spatial data is first collected from the primary sources and then entered into the databases. This data can be subsequently queried depending on what needed to be mapped and exported to Microsoft Excel; this is then imported to GIS software. Within the GIS software, the data is projected using an appropriate coordinate system.¹⁷¹ The projected data is then assembled in the print view and exported as an image file. This image is imported next to Adobe Photoshop where it

¹⁶⁷ ArcGIS Desktop is produced by ESRI (<https://desktop.arcgis.com/en/>) and QGIS is produced by a team of volunteers and is an open-source software (<https://www.qgis.org/en/site/>).

¹⁶⁸ Photoshop 2020 by Adobe (<https://www.adobe.com/ie/products/photoshop.html>) and Illustrator 2020 by Adobe (<https://www.adobe.com/ie/products/illustrator.html>).

¹⁶⁹ Anne Kelly Knowles, *Placing History, How Maps, Spatial Data and GIS are Changing Historical Scholarship* (Redlands: ESRI Press, 2008), p. 7.

¹⁷⁰ "Copernicus Land Monitoring Service - EU-DEM." (European Environmental Agency, 2017) <https://www.eea.europa.eu/data-and-maps/data/copernicus-land-monitoring-service-eu-dem>; "EMODnet DTM for European sea regions." (EMODnet, 2018) <https://www.emodnet-bathymetry.eu/data-products>.

¹⁷¹ Maps centered on Ireland use the TM65 Irish Grid coordinate system. General maps use the WGS84 coordinate system.

is layered with other map data (such as the base map) and edited before the final image is exported and included in the thesis.¹⁷²

Another core GIS technique used in this research to process historical maps was georeferencing. Georeferencing uses GIS software to add 'control points' that match locations on historical maps with the corresponding location on the modern map. The software then applies mathematical formulae to make the historical map conform to the modern map. This process allows us to compare the accuracy and content of historical maps to modern geography. By georeferencing historical maps, we can understand how the physical structure of the coast has changed and suggest how these changes may have impacted fisheries over time. This topic will be fully explored in Chapter 6.

As an example of the georeferencing in action, we can look at Giovanni Baptista Boazio's map of Ireland published in 1609 (See Map 1.2 on the proceeding page). Boazio was an Italian cartographer, and the first edition of his map of Ireland was commissioned by Robert Devereux, Earl of Essex, and released in 1599.¹⁷³ The 1609 edition of Boazio's map used here was updated from the 1599 original and published in a miniature version of Ortelius Abraham's atlas, *The Theatre of the Whole World*.¹⁷⁴ Boazio's primary source for the map was English military engineer, Robert Lythe, who conducted surveys in different parts of Ireland earlier in the sixteenth century. The map is a good indicator of the geographic knowledge the English had of Ireland at the time. By merely observing the map, we can see that the western and northern parts of the island are far less populated with place names, suggesting a lack of knowledge in those regions. Historians in the past have also suggested the visible banks between Dublin and Wicklow on the east coast were fishing banks, but this is unlikely, as they are far more likely to be sandbanks that posed a danger to ships.¹⁷⁵

¹⁷² Adobe Illustrator was also used at times for certain design elements.

¹⁷³ Andrews, *Shapes of Ireland, Maps and their Makers 1564-1839*, p. 57.

¹⁷⁴ Auctore Baptist Boazio, "Map of Ireland, c. 1609", in *Jan Baptist Vrients* (Antwerp: L'Epitome du Theatre de l'Univers d'Abraham Ortelius).

¹⁷⁵ de Courcy, *Ireland's Sea Fisheries: a History*, p. 14; John C. Appleby and Michael McCaughan, eds., *Irish Sea: Aspects of Maritime History* (Belfast: The Institute of Irish Studies, 1989), pp. 5-6.



Map 1.2 – Map of Ireland, c. 1609 by Baptista Boazio.¹⁷⁶

Map 1.3 over the page, shows the georeferenced version of the map. By georeferencing the map, we can see more clearly what parts of the map correspond best to the actual geography of Ireland. The georeferencing was achieved by adding control points that match up locations between the historical and modern maps. In this case, the locations of significant towns, coastal headlands, islands, rivers, and lakes were used to correct the historical map, as these locations have not shifted significantly since the sixteenth century. The distorted areas in the west and north of the map indicate Boazio's lack of knowledge and accuracy in those sectors. Parts of south Munster too are shown to be inaccurate, compared to the Old English and English heartlands in north Munster and Leinster which are rendered with much greater accuracy.¹⁷⁷

¹⁷⁶ Boazio, "Map of Ireland, c. 1609".

¹⁷⁷ Andrews, *Shapes of Ireland, Maps and their Makers 1564-1839*, p. 85.



Map 1.3 – Georeferenced Map of Ireland, c. 1609 by Baptista Boazio.¹⁷⁸

Boazio's map does contain a few direct mentions of fishing also. There are large decorative fish depicted and, more interestingly, a man in a canoe holding a fishing spear in the top right. Similar images of spears and archaeological finds have been made in Ireland, which indicates the spear shown by Boazio was likely used for fishing salmon. However, most records suggest the fish were speared from land or bridges over water, and not from boats, so there may have been some embellishment.¹⁷⁹ Salmon fishing is mentioned elsewhere on the map with 'The leape' (a salmon leap) being marked just outside Limerick. Likewise, the River Bann is marked with 'Band samon leape'. Dublin Bay is marked with a sand 'Barr', which would have limited navigation to the old port in the sixteenth century but might have also provided spawning habitat for species of fish and molluscs no longer found in the bay.

¹⁷⁸ This version used a thin plate spline georeferencing formula and was done in QGIS.

¹⁷⁹ Went, "The Pursuit of Salmon in Ireland", pp. 193-199.

The extent to which sixteenth-century fishers in Ireland employed maps to aid their work is unclear. If fishers made maps themselves, none have survived. However, it is also likely that fishers did not need maps and instead relied on the accumulated knowledge of previous generations of fishers to hold a 'mental map' of their fishing territory. Modern research demonstrated that fishers who worked on Lough Neagh in Northern Ireland possessed an extremely precise mental map of the Lough's substrate, perhaps even more accurate than the scientific surveys that had been conducted by that date.¹⁸⁰ The authors of this study found that mental maps became more accurate over time due to the economic benefit accuracy brought to the fishing communities. We can assume that similar local knowledge of seascapes aided fishers in the early modern period. As we will see later, this knowledge also made fishers valuable assets to armed forces, and pirates and fisher's knowledge could well have informed maps drawn by English and continental cartographers.

Overall, maps and GIS methods form an essential part of this thesis. These visual sources can provide images of fishing activities and methods that cannot be located elsewhere. Additionally, maps let us understand the physical space inhabited by people and animals in the past. Maps and GIS methods do have drawbacks. By their nature, maps are a very definite format, while historical data is often ambiguous and can be open to interpretation. However, maps remain invaluable in their ability to highlight spatial patterns in historical data. With a subject like fisheries, this is vital to understand, as the physical environment determined the nature of fisheries in different areas. GIS methods and visualisations can also provide vital insights into data collected from other types of sources. Both central databases used in this research were built from the ground up to incorporate spatial data which allows us to ask questions that would not otherwise be possible.

1.7 Conclusion

There is no direct evidence base for fisheries in early modern Ireland. Instead, this study sought to cast as wide a net as possible to harvest as much incidental evidence about fisheries as possible from a wide range of sources. The QDA methods used in this study allowed for expansive qualitative sources like the Irish State Papers to be searched for every relevant entry concerning fisheries. The further close reading and transcription of manuscript sources meant vital details could be found and added to the analysis of the fisheries. The use of the QFD

¹⁸⁰ John McKenna et al., "Accurate Mental Maps as an Aspect of Local Ecological Knowledge (LEK): A Case Study from Lough Neagh, Northern Ireland", *Ecology and Society* 13 (2008).

database then allowed all the information found in the qualitative sources to be stored, categorised, and analysed in detail.

Likewise, the FTD brought together trade data from a variety of quantitative sources. The core design aim of this database was to standardise this data and make it comparable between regions and periods. A key element of this standardisation was the conversion of all historical units used to transport fish to one standard measure of volume, TLW. The TLW not only allows for volumes to be compared between sources but also provides a far more precise idea of how much fish was extracted from the ocean and allows us to compare historical catches to modern extractions.

A range of analytical and visualisation methods were also used to highlight and understand trends that emerged in the data collected for this study. Included in this was a range of GIS methods that have allowed this study to uncover spatial patterns in Ireland's sixteenth-century fisheries that have not been observed before. Ultimately, the use of digital methods - such as QDA, relational databases and GIS - allows us to reach conclusions that extend well beyond the anecdotal conclusions that have been characteristic of past histories of Ireland's fisheries.

Chapter 2 – Ireland’s Fisheries around 1500

<i>Iscach mara muiridi</i>	Deep sea fishing
<i>A críchaib Baí is Béire</i>	From the regions of Dursey and Bere
<i>Medbhán Faíde firghlaine</i>	Laver of clean and fresh Whiddy
<i>Duileasc a cuanuibh Cléire</i>	Dulse from the harbours of Clear Island

From the twelfth-century text *Acallam na Senórach*.¹⁸¹

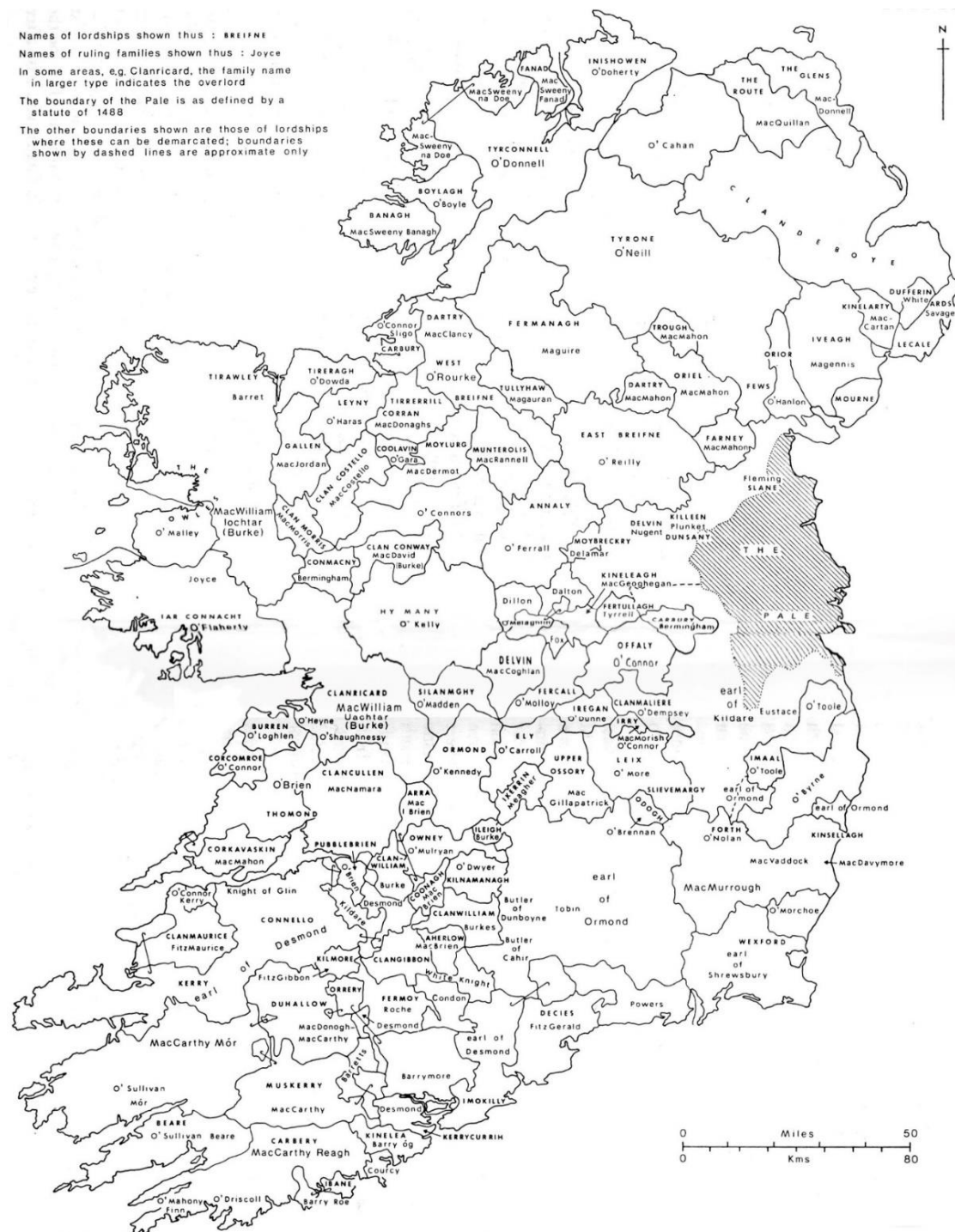
2.1 Introduction

In 1500, Ireland’s seas and oceans played host to a variety of fishing fleets; the coast was a tapestry of small fishing ports, fish-full bays, and industrious semi-independent coastal towns operating fishing fleets. The fishers who engaged in this activity came from across Europe, the countries including Spain, France, Scotland, England, Ireland and elsewhere. Ireland was far from a unified or centralised state in 1500. Map 2.1 on the following page gives some indication of this, as the island is a mosaic of different political and social groups. The politically fragmented nature of Ireland in part led to the diverse structure of its fisheries. However, this does create difficulties for a study such as this one. There is a scarcity of material related to Gaelic Ireland, and relative abundance of material related to the English parts of Ireland. Moreover, much of what was recorded about Gaelic Ireland was done so by English observers. This inherent bias is critical to keep in mind and will be discussed at greater length throughout the study.

This chapter will begin by exploring how Ireland’s fisheries developed over the medieval period. Material from the Irish Annals and Chancery records will help trace the development of fisheries up to the start of the sixteenth century. Later chapters in this thesis will explore how fishing in Ireland changed and developed over the sixteenth century. However, to do this, we must first establish a baseline from which to compare subsequent changes. Setting a benchmark such as this is a challenge; complete information for the fisheries in any single year does not exist.

¹⁸¹ Text and translation from, Breen, *The Gaelic Lordship of the O’Sullivan Beare*, p. 115.

However, by collating information from a variety of sources, we can build a picture of what fisheries looked like around a particular year.



Map 2.1 – Lordships of Ireland, c. 1534, by K. W. Nicholls.¹⁸²

¹⁸² Map by K. W. Nicholls, in Moody, Martin, and Byrne, *A New History of Ireland*, pp. 2-3. For the most part maps have been custom made in this thesis, but it was not necessary to remake Nicholls very detailed map for the current work.

The year 1500 is the year around which this baseline picture will be formed. Compared to later years in sixteenth-century Ireland, 1500 was a peaceful one. The successive century would be a transformative period for Ireland as the Tudor state incrementally increased its control of the island, introducing conflict and eventually leading to the downfall of Gaelic Ireland.¹⁸³ Also, by 1500, the patterns of fisheries that had developed over the medieval period were mostly set. As we will see, a variety of coastal communities had been established around Ireland, each navigating and utilising their respective marine environment to suit the local conditions. However, there were also broad similarities between these groups, and a great deal of mingling and trade took place, both internally and internationally. As the sixteenth century progressed, anthropogenic and natural factors would severely disrupt the pattern of fisheries established by 1500. As the remainder of this thesis will demonstrate, the nature and scale of change experienced by different fishing communities across the century were also intrinsically linked to their political alignment.

2.2 Fisheries in Ireland before 1500

The origins of intensive or commercial marine fishing in Ireland is not well understood. What we can say is that commercial fishing did not start in the year 1500. Zooarchaeological evidence has allowed researchers to pinpoint the birth of intensive marine fishing in England, and the wider European region, to the beginning of the tenth century AD. This research has shown that around 1000 AD, there was a shift away from freshwater fishing and a rapid increase in sea fishing. This transition has been coined the 'fish event horizon'.¹⁸⁴ Herring was the first species to be widely exploited in the first millennium; cod, hake and other gadids would later 'supplement these catches – primarily from the thirteenth to fourteenth centuries'.¹⁸⁵

No detailed zooarchaeological study of fishbones or fish genetics has been conducted yet for Ireland. However, as discussed in the introduction, Sheila Hamilton-Dyer has undertaken an

¹⁸³ Ibid.; Ciaran Brady, "Politics, Policy and Power, 1550– 1603", in *The Cambridge History of Ireland, Volume 2, 1550-1730*, ed. Jane Ohlmeyer (Cambridge: Cambridge University Press, 2018); Ciaran Brady and Raymond Gillespie, eds., *Natives and Newcomers: Making of Irish Colonial Society, 1534-1641* (Dublin: Irish Academic Press, 1986).

¹⁸⁴ James H. Barrett, A. M. Locker, and C. M. Roberts, "The Origins of Intensive Marine Fishing in Medieval Europe: The English Evidence", *Proc Biol Sci* 271, no. 1556 (2004).

¹⁸⁵ Ibid., p. 2420.

overview of the available fishbones evidence from existing archaeological reports.¹⁸⁶ This evidence shows that the intensity of cod fishing increased throughout the medieval period in Ireland, matching what has been observed in other parts of Europe.¹⁸⁷ However, the presence of larger fish might be overstated in the data, as for the most part these assemblages were hand-collected, which means smaller bones from species like herring might have been overlooked due to a lack of sieving.¹⁸⁸ Overall, much more research is required before definitive conclusions can be drawn from Irish zooarchaeological evidence. Fortunately, new research projects promise to increase our range of knowledge in this area through the application of cutting-edge methods to the study of Irish archaeological material.¹⁸⁹

2.2.1 Irish Chancery Records

As discussed in the previous chapter, the records of the Irish Chancery are one of the most comprehensive printed documentary sources extant for medieval Ireland. The records run intermittently from 1244 to 1509 and were surveyed in detail for this research in an effort to attain a greater understanding of Ireland's medieval fisheries.¹⁹⁰ These records provide the first quantitative evidence of intensive, commercial marine fisheries in Ireland. However, these records do have an inherent regional bias, relating mostly to the areas in which the Norman state had the most significant control following their invasion of Ireland in the twelfth century.¹⁹¹ They are far from a continuous account of fishing in medieval Ireland and only provide snippets of information over three centuries. However, even these snippets tell us a great deal about the nature of Ireland's fisheries in the period.

The first spike of records relating to fishing occurred in 1258. In that year the King's son, Lord Edward, was fighting in Wales, and several shipments of fish came from Ireland to support him.¹⁹² While these shipments do not represent regular commercial activity, they demonstrate the capacity within Ireland's fisheries for large orders of sea fish. It is clear from these records

¹⁸⁶ Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland".

¹⁸⁷ Ibid., pp. 236-237. See Chapter 6 of the current work for further discussion of this evidence.

¹⁸⁸ Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland", p. 236.

¹⁸⁹ See, Susan Flavin, "FoodCult: Food, Culture and Identity in Ireland c. 1550-1650." (Trinity College Dublin, 2020) <https://foodcult.eu/>. Again, see Chapter Six for further discussion.

¹⁹⁰ The records have been collected and transcribed by the CIRCLE project at TCD, Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*.

¹⁹¹ Namely the east and south-east coasts.

¹⁹² Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry III, no. 16, QFD ID 1563, no. 17, QFD ID 476, no. 18, QFD ID 472, no. 19 QFD ID 473, no. 20 QFD ID 474. Lord Edward would later become King Edward I of England, Marc Morris, *A Great and Terrible King* (London: Windmill Books, 2009).

that commercial sea fishing was active in Ireland from at least the thirteenth century. A Chancery letter from January 1258 provides us with rare price information for fish from this period. It relates to the purchase of herring, hake, eel (*Anguilla Anguilla*), and cod to be sent to Chester to supply the English army.¹⁹³ Table 2.1 below sets out the total amount ordered of each of these species in TLW, along with the price paid in modern pounds per kilogram.¹⁹⁴

Species	Total Order (TLW)	Total Cost (Mod. £)	Price per kg (Mod. £)
Herring	6.75	11.55	0.00171
Hake	5.18	11.67	0.00225
Eel	1.86	10.00	0.00537
Cod	0.27	11.25	0.04172

Table 2.1 – Order of Fish from Ireland, 1258.

There is little reliable data from other European countries to which to compare these prices.¹⁹⁵ Additionally, since this was a Crown purchase, it is not clear if these were real market values or preferential Crown rates.¹⁹⁶ However, the prices can highlight what species were commercially important and their relative value. These figures tell us that herring was the largest fish by volume but also the cheapest per kilogram.¹⁹⁷ Herring has been shown to be the most intensively fished marine species in other parts of medieval Europe.¹⁹⁸ It is a pelagic shoaling fish that can occur in vast numbers in various habitats across European waters.¹⁹⁹ The abundance of herring, as well as their feeding and reproductive habits, made them prime

¹⁹³ "Anguilla anguilla (Linnaeus, 1758) European eel." (Fishbase.org, 2020) <https://www.fishbase.se/summary/Anguilla-anguilla.html>; Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry III, no. 18, QFD ID 1560.

¹⁹⁴ Modern pound value reached by converting everything to pence and dividing by 240. Pounds (£) contained 240 pence (*d.*), shillings (*s.*) contained 12*d.* and farthings were worth .25*d.*

¹⁹⁵ See collections such as; Robert C. Allen and Richard W. Unger, eds., *The IISH List of Datafiles of Historical Prices and Wages* (Amsterdam: International Institute of Social History, 2020), <http://www.iisg.nl/hpw/> & Matthew Curtis and Peter H. Lindert, eds., *Global Price and Income History Group* (Davis: University of California, 2019), <http://gpih.ucdavis.edu/index.html>.

¹⁹⁶ This practice will be discussed in greater detail in Chapter 4 in the context of the sixteenth century.

¹⁹⁷ See, Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry III, no. 19, QFD ID 473 & no. 16 QFD ID 1563, for two more prices for herring from around this time. These prices are similar to the one mentioned in the table above.

¹⁹⁸ Barrett, Locker, and Roberts, "The Origins of Intensive Marine Fishing in Medieval Europe: The English Evidence"; Barrett and Orton, *Cod & Herring: The Archaeology & History of Medieval Sea Fishing*.

¹⁹⁹ Henk J. L. Heessen, Niels Daan, and Jim R. Ellis, eds., *Fish Atlas of the Celtic Sea, North Sea, and Baltic Sea* (Stompetoren: Wageningen, 2015), pp. 140-141.

targets for fishers in the medieval and early modern periods.²⁰⁰ The importance of herring to the sixteenth-century fisheries will be discussed at length throughout the rest of this thesis.

In this shipment, hake was the second largest by volume and about 30 per cent more expensive than herring. Hake is a demersal, predatory fish, in the same order as cod (Gadiformes, or gadids for short).²⁰¹ Hakes tend to stay at the bottom of the water column during the day but rise closer to the surface at dusk, returning to the bottom at dawn.²⁰² Today hake is caught across the north, west, south and south-west coasts of Ireland, with most captures taking place at depths less than 200m.²⁰³ This depth would have placed hake within reach of medieval fishers using hooks and line.

The shipment contained a further 1.86 TLW of eel, which was about 80 per cent more expensive than herring. The price difference suggests that eel was a rarer and more high-end product. Eels are a species with an incredible life cycle that sees them start life in the Sargasso Sea in the middle of the Atlantic Ocean before migrating across the ocean to feed and grow in European rivers. They spend the majority of their lives in these rivers before returning to the Sargasso Sea to spawn.²⁰⁴ Eels in Ireland would have been caught in freshwater rivers using mostly fixed fishing methods like weirs.²⁰⁵ The smaller scale of river fishers compared to commercial sea operations helps explain why eel is more expensive than the herring and hake.

Finally, only 90 cod were included in the shipment. These 90 cod were only marginally cheaper than 6.75 tonnes of herring, making the cod 154 per cent more costly. This suggests that at this time cod was a rarer catch product compared to herring or hake, or it is also possible that cod was a bycatch of the herring fishery, rather than a targeted species itself in this instance.²⁰⁶ Cod are found throughout the whole North Atlantic region and are demersal fish and predate other fish, such as herring, at different stages in their life cycle.²⁰⁷

²⁰⁰ "Herring in the southern Irish Sea, Celtic Sea and South West of Ireland, Pelagic trawl" (SEAFISH, 2017); H. D. Gerritsen and C. Lordan, eds., *Atlas of Commercial Fisheries Around Ireland 2nd Edition* (Oranmore: Marine Institute, Ireland, 2014), p. 38.

²⁰¹ "Hake (Merluccius merluccius)." (European Commission, 2019)
https://ec.europa.eu/fisheries/marine_species/wild_species/hake_en.

²⁰² Heessen, Daan, and Ellis, *Fish Atlas of the Celtic Sea, North Sea, and Baltic Sea*, p. 184-185.

²⁰³ H. D. Gerritsen and E. Kelly, eds., *Atlas of Commercial Fisheries around Ireland, Third Edition* (Oranmore: Marine Institute, Ireland, 2019), p. 51.

²⁰⁴ Mara Goldman, Paul Nadasdy, and Matt Turner, eds., *Knowing Nature : Conversations at the Intersection of Political Ecology and Science Studies* (Chicago, Ill.: University of Chicago Press, 2011).

²⁰⁵ A. E. J. Went, "Eel Fishing at Athlone: Past and Present", *The Journal of the Royal Society of Antiquaries of Ireland* 80, no. 2 (1950); Jim Mac Laughlin talks more about the very early catching of eels in Ireland during the Mesolithic period, Mac Laughlin, *Troubled Waters: A Social and Sultural History of Ireland's Sea Fisheries*, p. 33.

²⁰⁶ Bycatch are fish caught unintentionally while targeting another species.

²⁰⁷ Heessen, Daan, and Ellis, *Fish Atlas of the Celtic Sea, North Sea, and Baltic Sea*, pp. 189-191.

There is another spike in fishing-related entries in the Chancery records in 1298, this time driven by Edward I's war in Scotland.²⁰⁸ Almost all the fish exports from Ireland at this time went to Carlisle in the far north of England. These records show the extent to which the fisheries in Ireland could supply large amounts of fish to help feed the English army in Scotland. Later, in 1323, more army provisions were sent from Ireland, this time to Skinburness in Scotland, as the wars continued there.²⁰⁹

From the mid-fourteenth century onwards, the Chancery records mostly relate to the granting of fishing rights and the unregulated export of fish. Several entries also complain of merchants exporting fish without a license.²¹⁰ The Black Death first hit Ireland in 1348 and continued in waves for the next several centuries, so these concerns over export may form part of broader efforts to secure the food supply in times of crisis.²¹¹ The wider impact of the plague on port towns and their fisheries is not well understood, but the evidence suggests most cities suffered commercially and demographically as the population was decimated.²¹²

A letter patent from January 1356 relates to the charging of customs on goods entering and leaving Drogheda. The customs were enacted to pay for a wall around the town, 'which had been impoverished both by the great and horrible pestilence and because of merchandise of the burgesses accidentally lost at sea'.²¹³ The vast array of goods included on the customs list is a sign of international trade connections the town held in the fourteenth century. The list included customs for herring, salmon, and generic 'dried fish'; it also lists a wide assortment of exotic spices like saffron and luxury foods like almonds and rice.²¹⁴ These customs again show what species were commercially important. Similar commodities are listed in general customs charged across Ireland that were enacted by the Irish Parliament in 1382.²¹⁵ Export licenses for fish also indicate the extent of trade networks in the late fourteenth century. For example, an export licence from 1386 permitted cod, herring, and salmon to be sent to the priory of

²⁰⁸ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward I, Close Roll 26, no. 22 QFD ID 482, no. 23 QFD ID 493, no. 28 QFD ID 484, no. 34 QFD ID 487, no. 36 QFD ID 1564, no. 40 QFD ID 479. Close Roll 27, no. 2 QFD ID 477, no. 3 QFD ID 483, no. 4 QFD ID 478, no. 5 QFD ID 486, no. 6 QFD ID 485, no. 23 QFD ID 481, no. 38 QFD ID 489, no. 40 QFD ID 488, no. 43 QFD ID 491, no. 47 QFD ID 495, no. 48 QFD ID 490, no. 49 QFD ID 492.

²⁰⁹ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward II, Close Roll 17, no. 7, QFD ID 494.

²¹⁰ See for example, *Ibid.*, Edward III, Patent Roll 10, no. 4 QFD ID 497. Close Roll 29, no. 39 QFD ID 499, no. 44 QFD ID 506. Patent Roll 32, no. 141, QFD ID 509

²¹¹ Maria Kelly, "'Unheard-of Mortality': The Black Death in Ireland", *History Ireland* 9, no. 4 (2001).

²¹² *Ibid.*

²¹³ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 4, no. 2, QFD ID 515.

²¹⁴ *Ibid.*, Richard II, Patent Roll 4, No 2, QFD ID 514.

²¹⁵ *Ibid.*, Richard II, Patent Roll 5, no. 247, QFD ID 551.

Llanthony near Gloucester in England.²¹⁶ A grant of a license from 1387 gave Robert Crull the right to load grain and fish on his ship and transport it to 'England, Wales, Bayonne, Bordeaux and Portugal'.²¹⁷

In the fifteenth century, mentions of fish in the records become scarce, and this coincides with the diminishing involvement of the English Crown in Irish affairs at this time. The decline in fishing records should not necessarily be read as a downturn in the fisheries, as there were fewer records on all topics. However, it does suggest the English were not as invested in the export, regulation, and taxation of fish as they had been in earlier centuries. This would begin to change in the sixteenth century as the English state began to re-exert its control over Irish affairs.

If a macro view of the Chancery records is employed, we can begin to build a more general picture of where commercial fishing was taking place in medieval Ireland. Using the QDA analysis described in Chapter 1, we can extract all mentions of fishing locations in Ireland throughout the whole Chancery records and map these out, see Map 2.2 on the following page. The full dataset related to this analysis is printed in Appendix 1 of the online data appendices.²¹⁸

²¹⁶ Ibid., Richard II, Close Roll 9, no. 64, QFD ID 525.

²¹⁷ Ibid., Richard II, Patent Roll 10, no. 163, QFD ID 538.

²¹⁸ Data hosted online at, <http://hdl.handle.net/2262/96098>.



Map 2.2 – Fishing Locations in Ireland, 1258-1497.²¹⁹

Map 2.2 shows both freshwater (blue circles) and marine fishing sites (red circles). The data shows a multitude of smaller fishing ports on the south and east coast as we might expect. Additionally, the cities of Limerick and Galway feature prominently; both were established

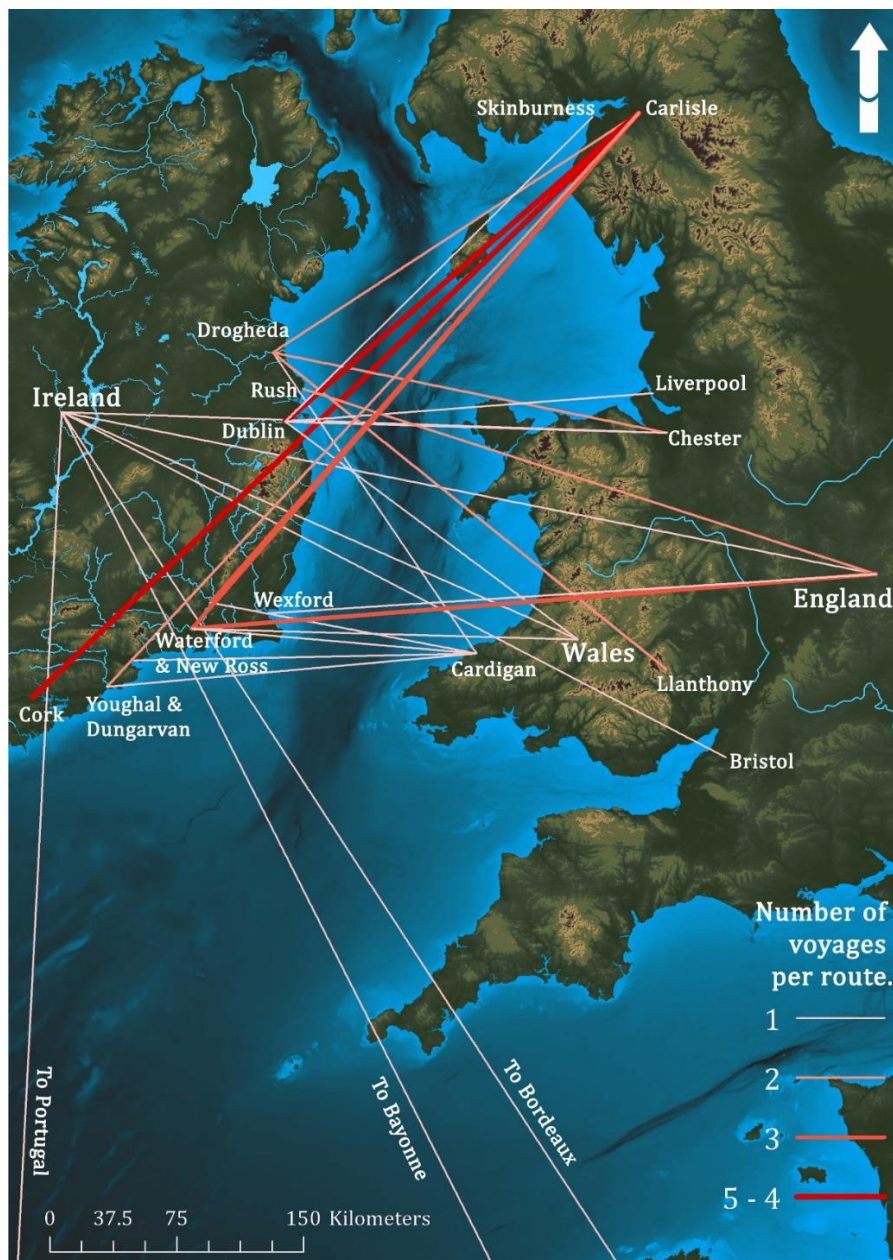
²¹⁹ The first site is mentioned in 1258 and the last in 1497.

Norman trading towns by the thirteenth century. The most frequently mentioned location was the Shannon Estuary. Most of these entries were concerned with granting the rights to the fishing weirs on the river and estuary. The highest concentration of individual locations was around Dublin, shown in more detail on Map 2.3 below. The River Bann was the only fishing site on the north coast that appeared in these records, and as we will see later, the river continued to host a significant salmon fishery in later centuries.



Map 2.3 – Fishing Mentions Dublin Region, 1258-1497.

Map 2.4 on the next page shows the export locations of fish that originated in Ireland from the Chancery records. The lines indicate from where in Ireland the fish originated and to where outside Ireland the fish was brought. The lines are not meant to indicate the route taken by a ship, but rather connections between locations. The map is akin to an airline flight map that shows the connections between airports. For some entries, no specific locations were mentioned and instead only countries of origin were discussed. In those cases, the centre point of each country was used to map the network. The thickness of the lines indicates the number of mentions of each connection.



Map 2.4 – Export of Fish from Ireland, 1258-1403.

As mentioned, the concentration of shipments going to Cardigan and Carlisle was due to the supply of the English army during a Welsh revolt in the mid-thirteenth century and Edward I's invasion of Scotland in the late thirteenth century, respectively. While many of these shipments were not regular commercial activity, they at least show the capacity for large volumes of fish to be transported across the Irish sea. Together these entries illustrate the strong connections between ports on both sides of the Irish and Celtic seas in the medieval period. The higher volume of exports from the south-east ports would suggest they were more involved in international trade than Dublin, which probably had a larger local market.

2.2.2 The Irish Annals

A limitation of the Chancery records is their bias towards the Norman and later English, parts of Ireland. There are however documentary sources that predated the Norman invasion and continued to be subsequently written in the Gaelic parts of Ireland. A selection of the most extensive Irish Annals were analysed using QDA methods to see what they can tell us about the fisheries.²²⁰ Entries from the Annals post-1500 will be included later in this study, but this section considers what they show regarding fishing pre-1500. All the dates from the Annals have been kept in their original formats and not been altered.²²¹

Fishing mentions from the Annals were not included in the main QFD due to the workload involved and the limited references. Despite this, the Annals still are useful in strengthening our understanding of fishing and the Irish attitude to fish from an early date. The most common fish mentioned in the Irish Annals is salmon. Salmon had an important role in Irish commerce and culture and was highly valued. For instance, the Annals of Tigernach report that in T564.1, a host of Aodh Ó Conchobhair raided Munster and there they 'burned Killaloe and demolished the weir of Kincora, and they ate up the salmon that lived in the well'.²²² This entry demonstrates that salmon weirs were important economic assets from at least the sixth century and likely earlier. Before the dissolution of the monasteries, many salmon weirs were controlled by religious houses.²²³ Salmon weirs would continue to be valuable assets and points of conflict in the early modern period. Another entry from T1113.6 reports that a salmon 'twelve feet in length, twelve hands in breadth without being split' had been caught in Clonmacnoise that year.²²⁴

Some entries in the Annals are more fanciful in nature than those discussed thus far. For instance, in T564.1, the Annals of Tigernach reported a fisherman caught a 'muirgelt' (mermaid) on the strand of 'Ollarba'.²²⁵ In U1118.7, both the Annals of Ulster and Loch Cé report fishers caught two mermaids, one in Osraige (roughly the area of modern Kilkenny) and another in Port Láirge (Waterford).²²⁶ It is difficult to know if these reports of mermaids correspond to the

²²⁰ All the Annals used were sourced from, "CELT: Corpus of Electronic Texts", <https://celt.ucc.ie//index.html>. A full list of the Annals used in this study can be found in the bibliography.

²²¹ In some cases, the dates in the Annals may be a few years different than modern dates.

²²² Donnchadh Ó Corráin, ed. *The Annals of Tigernach (Gearóid Mac Niocaill)* (Cork: CELT: Corpus of Electronic Texts, 2010), <https://celt.ucc.ie//published/T100002A/index.html>, T564.1, p. 144.

²²³ Newport Benjamin White, *Extents of Irish Monastic Possessions, 1540-1541, from Manuscripts in the Public Record Office, London* (Dublin: Stationery Office, 1943).

²²⁴ Ó Corráin, ed. *The Annals of Tigernach*, T1113.6, p. 32.

²²⁵ *Ibid.*, T564.1, p. 147.

²²⁶ Donnchadh Ó Corráin and Mavis Cournane, eds., *The Annals of Ulster AD 431-1201* (Cork: CELT: Corpus of Electronic Texts, 2020), <https://celt.ucc.ie//published/T100001A/index.html>, U1118.7, p. 563;

sighting of a particular fish or marine mammal, or are purely fictional. For instance, reports of a mermaid in other contexts have been related to the discovery of manatees by Europeans.²²⁷

In relation to other marine mammals, the Annals explicitly mention whales washing ashore. The number and content of these entries suggest they were rare events. For example, an entry in the Annals of the Four Masters from M739.6 says, 'The sea cast ashore a whale in Boirche, in the province of Ulster. Everyone in the neighbourhood went to see it for its wondrousness'.²²⁸ These strandings were special events that could save whole communities during winters or times of famine. A later entry from the Annals of Connacht in 1246.2 records that, 'A whale was stranded in Carbury, at Cuil Irra, which brought great relief and joy to the countryside'.²²⁹

Similarly, a pod of pilot whales washed ashore near Dublin in 1331. There was a famine at the time, and 200 of the whales were killed, giving great relief to the city.²³⁰ There is also evidence to suggest the Irish hunted young whales using harpoons in the eleventh century.²³¹ Another entry from the Annals of Ulster speaks of 'a great slaughter of porpoises on the coast of Ard Cianachta by the foreigners'.²³² Ard Cianachta is in modern-day Louth, and 'foreigners' refers to the Norse. These entries show that medieval people did have knowledge of some marine mammals and valued them when they could get access.

An entry from LC1217.2 in the Annals of Loch Cé provides more concrete details on the movements and practices of medieval fishers. It reports that fishers from Port-Lairge (Waterford) and along the coast from Loch-Carman (Wexford) to Doire Choluim Chille (Derry) all travelled to Manainn (The Isle of Man) to fish. The entry says they 'committed violence' there and 'were all slain in punishment for their violence in Manainn'.²³³ If this entry is not an exaggeration, it suggests that fishers from both the Norman and Gaelic parts of the east and north coasts were capable of travelling to the Isle of Man for a seasonal fishery. This entry also provides an earlier date for the start of intensive marine fishing in Ireland than the Chancery

William M. Hennessy, ed. *Annals of Loch Cé 1* (Cork: CELT: Corpus of Electronic Texts, 2008), <https://celt.ucc.ie/published/T100010A/index.html>, LC 1118.9, p. 111.

²²⁷ Cristina Brito, "On Mermaids and Manatees: A First Approach to the Evolution of Natural History Images in Early Modern Times." (paper presented at the Report from the European Cetacean Society Conference Workshop, Setúbal, Portugal, 2013).

²²⁸ John O'Donovan and Emma Ryan, eds., *Annals of the Four Masters Volume 1* (Cork: CELT: Corpus of Electronic Texts, 2002), <https://celt.ucc.ie/published/T100005A/index.html>, M739.6, p. 342.

²²⁹ The Cúil Irra peninsula is in modern day Sligo, Pádraig Bambury, ed. *Annals of Connacht* (Cork: CELT: Corpus of Electronic Texts, 2008), <https://celt.ucc.ie/published/T100011/index.html>, 1246.2, p. 88.

²³⁰ Margaret Murphy and Michael Potterton, *The Dublin Region in the Middle Ages* (Dublin: The Discovery Programme, 2010), p. 394.

²³¹ Breen, "Marine Fisheries and Society in Medieval Ireland", p. 91.

²³² Ó Corráin and Cournane, *The Annals of Ulster AD 431-1201*, U828.3, p. 285.

²³³ Hennessy, *Annals of Loch Cé 1*, LC1217.2, p. 257.

records (1217 compared to 1258), and one that might have involved both Gaelic and Normans. It cannot be known if the violence that occurred on the Isle of Man was due to competition between these rival groups. The most likely species targeted was herring. Modern research has shown that spawning herring populations fluctuate between the Irish Mourne coast and Isle of Man on a regular basis.²³⁴ A similar change of spawning location in the thirteenth century could have driven medieval fishers from their fishing grounds in Ireland to seek out the herring in the Isle of Man.

Overall, the Annals suggest that river fish, mainly salmon, played an important economic and cultural role in Irish society, although, the Annals may also over-represent salmon because of the religious houses control over weirs.²³⁵ However, the story from the Annals does reflect what we know about fisheries from other parts of Europe: river fish dominated prior to the 'fish event horizon' of the tenth century, after which we begin to see the growth of intensive marine fisheries. The previously discussed entry from LC1217.2 is the earliest such description of intensive marine fishing that could be found for this study. Overall, the Annals provide few concrete details on the practical operations of the fisheries or their economic and environmental impact.²³⁶

This short section has by far not considered all the evidence for fisheries in Ireland in the centuries before 1500; there is more that could be done with further research. What we can say about early fisheries in Ireland, based on this evidence, is that commercial fishing began in Ireland from at least the start of the thirteenth century. The target species at that time were very similar to those of the early modern period. Herring was the largest catch by far, while hake was also a common target. Cod was fished too, but the documentary evidence suggests this species was not as crucial as herring or hake. The most important river fish were salmon and eels, both of which would remain culturally and economically significant for centuries. The fishing towns established by the Normans would continue to be some of the most significant domestic fisheries in Ireland up to the modern period. The Norman presence in Ireland also provides us with a wealth of documentary sources but introduces an inherent bias. Irish documentary sources, such as the Annals, provide some details on the significance of fish in medieval Ireland but have few concrete details. Finally, as we will see, the patterns of fisheries

²³⁴ Mark Dickey-Collas, Richard D. M. Nash, and Juan Brown, "The Location of Spawning of Irish Sea Herring (*Clupea harengus*)", *Journal of the Marine Biological Association of the UK* 81, no. 04 (2001).

²³⁵ A. E. J. Went, "Fishing Weirs of the River Erne", *The Journal of the Royal Society of Antiquaries of Ireland* 75, no. 4 (1945); White, *Extents of Irish monastic possessions, 1540-1541, from manuscripts in the Public record office, London*.

²³⁶ But there is certainly scope for a more detailed study than the one undertaken here of fisheries using the Irish Annals and other medieval documentary sources.

dating from the medieval period in Ireland continued to shape fisheries in the early modern period and up to the present day.

2.3 Overview of Ireland's Fisheries around 1500

In the introduction to *A New History of Ireland*, T. W. Moody conducted a survey of the state of politics and land ownership in Ireland around the year 1534.²³⁷ In that vein, this section provides an overview of Ireland's main fisheries around the year 1500. This outline of the fisheries will provide a useful starting point from which to compare any changes and continuities throughout the rest of the sixteenth century. This survey will not discuss every fishery in great detail but will indicate some of the key fishing locations that will feature throughout the rest of this study.

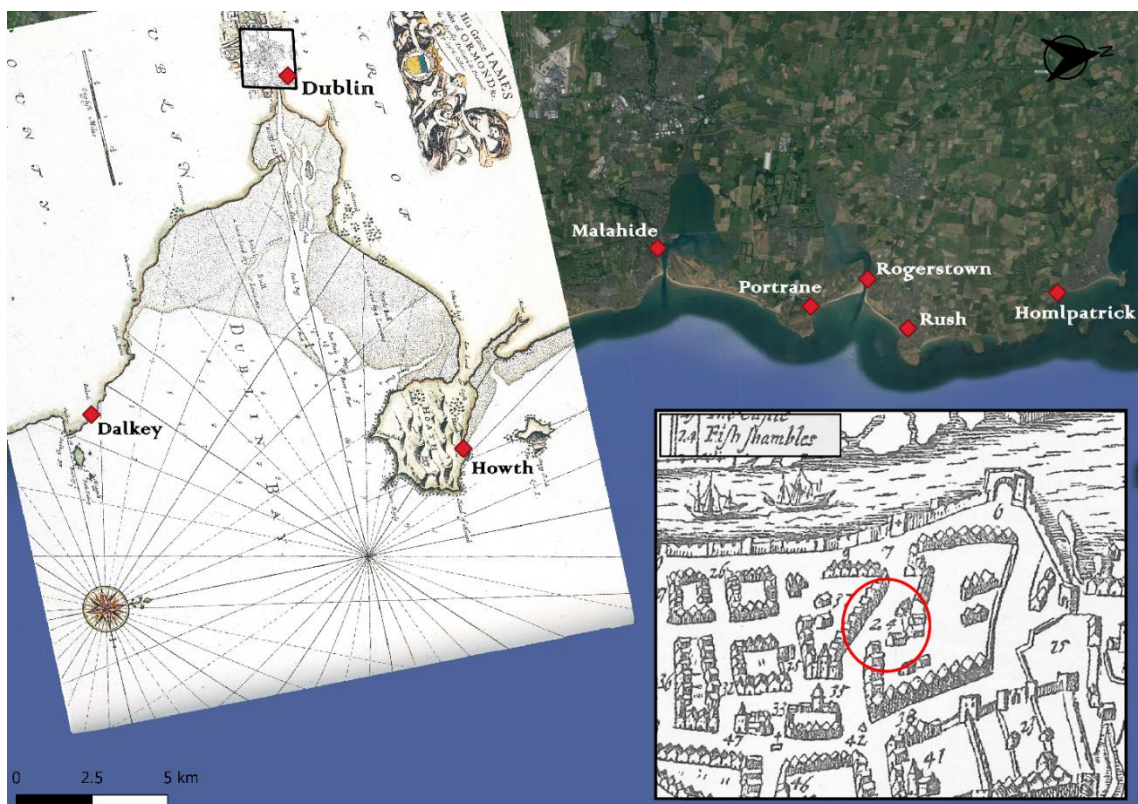
The natural place to start this tour of the Irish fisheries is in Dublin, which was the largest urban centre of Ireland in 1500 and the central town of the English Pale on the east coast.²³⁸ Dublin was the administrative capital of the English regime in Ireland, while the landowning classes of the city and its hinterland were mostly Old English in descent.²³⁹ Dublin city lies in the fold of a sizeable bay where the River Liffey meets the sea; prior to the modern sea walls' construction, the town could only be reached through a narrow channel running between shallow beaches and shifting sandbanks. In part due to the inherent difficulty of navigating into Dublin port, several smaller satellite harbour towns sprang up around the city, acting as additional landing places for fishing boats that fed fish to Dublin city. In various royal correspondence from the medieval period, the phrase, 'all harbours from Holmpatrick in the North to Dalkey in the south', is used to describe the catchment area of fish brought into Dublin.²⁴⁰ Map 2.3 indicated some of these locations mentioned in the medieval sources, but Map 2.5 on the following page shows in more detail the principal landing places around Dublin in the early sixteenth century.

²³⁷ Moody, Martin, and Byrne, *A New History of Ireland*, pp. 4-20.

²³⁸ H. B. Clarke, "Dublin, Part I, to 1610", *Irish Historic Towns Atlas (IHTA)*, no. 11 (2002) p. 1.

²³⁹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 5.

²⁴⁰ Murphy and Potterton, *The Dublin Region in the Middle Ages*, p. 399.



Map 2.5 – Smaller fishing towns of the Dublin region.²⁴¹

Major fishing locations are marked with red diamonds.

This graphic uses modern satellite imagery, onto which two historical maps are overlaid. The larger of these maps is the first detailed sea chart of Dublin Bay, drawn by Captain Greenville Collins in 1693.²⁴² Collins' map shows the dangerous sandbanks around Dublin and the narrowness of the channel leading up to the city. The second smaller map outlined with black is John Speed's 1610 map of Dublin. Speed's work is the earliest rendition of Dublin we have, and it shows the scale of the city in this period.²⁴³ In the bottom right corner of the map is a zoomed-in view of Speed's map. Number 24, as circled in red, denotes the 'Fish Shambles', which was Dublin's primary fish market in the early modern period, and an echo of this remains in the city today with Fishamble Street.²⁴⁴ Marked also on Speed's map is 'Ormuntown', which was also known as Oxmantown in the medieval period.²⁴⁵ The area was created after the

²⁴¹ Collins Greenville, "Dublin and Dublin Bay, 1693", in *John Blake, Sea Charts of the British Isles*, ed. John Blade (London: Conway, 2005), p. 88; John Speed, "Speed's Map of Dublin", 1610 (Dublin City Library and Archive: HM01).

²⁴² Greenville, "Dublin and Dublin Bay, 1693".

²⁴³ Speed, "Speed's Map of Dublin".

²⁴⁴ For those not familiar with Dublin there is no longer a fish market at this location.

²⁴⁵ Curiously Speed's map places this just south of the river, but documentary sources place it firmly north of the river.

Norman invasion when Dublin's Norse population was expelled north of the river.²⁴⁶ Archaeological excavations have recovered the remains of a possible medieval herring fishery from this area.²⁴⁷ Arthur Went's work shows that Dublin had active and highly organised oyster fisheries in the sixteenth century.²⁴⁸ The city corporation had several ordinances in place to protect these, and harvesting rights of the oysters were kept exclusively for freemen of the city. Went has also written about the important salmon fishery in the River Liffey just outside Dublin city.²⁴⁹

Several factors suggest that Dublin consumed most of the fish and oysters caught in its vicinity, including the presence of satellite towns, the organised nature of its market, and its relative size compared to other Irish settlements. Indeed, it seems that Dublin was more consumer-focused than towns like Waterford, which operated a much stronger export trade in the medieval and early modern periods. The evidence for Dublin's fish consumption will be explored further in Chapter 6. However, can we say how large the Dublin consumer market was in the sixteenth century? Exact population figures for Ireland do not become available until 1670, but estimates have placed the population at between 0.5²⁵⁰ to 1 million in the year 1500.²⁵¹ Cullen has surmised that the population grew at an annual rate of 0.3 per cent over the sixteenth century, reaching 1.4 million in 1600.²⁵² It is estimated that Dublin had a population of 5,000 in the year 1600; unfortunately, there are no estimates for the year 1500.²⁵³ Even though these are imperfect figures, they suggest Dublin was the most significant urban centre and market in Ireland in the sixteenth century and would have required a steady supply of locally caught or imported fish. However, we know that Dublin did export some fish over the sixteenth century as well. The extent of the fish trade across Ireland will be discussed in Chapter 4.

In 1355, Thomas de Rokeby, Justiciar of Ireland, sent a letter to the mayor and bailiffs of Dublin in which he refers to the 'frequent' complaints of Dublin's inhabitants regarding people

²⁴⁶ Edmund Curtis, "Norse Dublin", *Dublin Historical Record* 41 (1998), p. 94.

²⁴⁷ Linzi Simpson and Margaret Gowen, "0529 - 161-168 Church Street/3-15 Hammond Lane, Dublin, Dublin" (2002).

²⁴⁸ A. E. J. Went, "Oyster Fisheries", *Dublin Historical Record* 18, no. 2 (1963).

²⁴⁹ "Fisheries of the River Liffey. Notes on the Corporation Fishery up to the Dissolution of the Monasteries"; "Fisheries of the River Liffey: II. Notes on the Corporation Fishery from the Time of the Dissolution of the Monasteries".

²⁵⁰ Raymond Gillespie, *The Transformation of the Irish Economy 1550-1700* (Dublin: The Economic and Social History Society of Ireland, 1991), puts the figure at between 0.5 and 0.75 million, p. 13.

²⁵¹ L. M. Cullen, "Population Trends in Seventeenth-Century Ireland", *Economic and Social Research Institute, Economic and Social Review* 6 (1975), p. 163.

²⁵² *Ibid.*, p. 162.

²⁵³ Gillespie, *The Transformation of the Irish Economy 1550-1700*, p. 28.

forestalling the fish market and exporting fish from the Pale without a license.²⁵⁴ Forestalling was the practice of buying goods before they reached the markets to avoid city taxes.²⁵⁵ de Rokeby writes that 'lodgers or braggers take fish in the ports of Dublin, Howth, Malahide, Rogerston, Portraghlyn, Russhe, Holmpatrick, Dalkey and elsewhere, and buy them and by night and dawn or twilight bring them to the city and salt them secretly in their houses, or put them in casks and convey them by night to places where the King is at war'.²⁵⁶ Exporting fish to conflict zones could get the forestallers prices far above the domestic market value of the fish. The purpose of the laws against forestalling and export was to control market prices and ensure a steady supply of food to urban centres like Dublin. Preserving prices, food security, and famine prevention were constant concerns for the authorities in all medieval and early modern states.²⁵⁷ However, not all the fish caught near Dublin was consumed there, as the Chancery records show that a select few merchants were granted licenses to export their fish.

The next major fishing town north of Dublin was Drogheda, which shared many of the same characteristics; it was a Norman town in the Pale with a strong trade connection with Chester.²⁵⁸ Drogheda lies at the mouth of the River Boyne, which has a long history as a salmon fishing river, going right back into Irish mythology. Went has written about the historical material available to tell the story of the Boyne's salmon fisheries.²⁵⁹ Chiara Buldorini has also written extensively about Drogheda's foundation as a Norman town and the development of fishing rights on the River Boyne.²⁶⁰ The customs list from the Chancery records discussed earlier indicated that the town had a thriving international trade from at least the fourteenth century.

The Irish Parliament of 1460 was held in Drogheda, and a statute enacted by that body provides further evidence for the town's trade connections.²⁶¹ The statute describes various Drogheda merchants freighting a ship for a voyage to 'Westmony' in Iceland.²⁶² Upon their arrival in Iceland, they found 'the stock of fish sold to other merchants of England and this land, so that

²⁵⁴ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward III, Close Roll 29, no. 39, RCH, 59/39, QFD ID 505.

²⁵⁵ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 31; Wendell Herbruck, "Forestalling, Regrading and Engrossing", *Michigan Law Review* 27 (1929).

²⁵⁶ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward III, Close Roll 29, no. 39, RCH, 59/39, QFD ID 505.

²⁵⁷ For more on the Irish case see, Raymond Gillespie, "Harvest Crises In Early Seventeenth-Century Ireland", *Ir. Econ. Soc. Hist.* XI (1984); Margaret E Crawford, ed. *Famine: The Irish Experience 900-1900: Subsistence Crises and Famines in Ireland* (Edinburgh: John Donald, 1989).

²⁵⁸ Donald Woodward, "The Trade of Elizabethan Chester" (PhD diss., The University of Hull, 1970).

²⁵⁹ Went, "Material for a History of the Fisheries of the River Boyne".

²⁶⁰ Chiara Buldorini, "Drogheda as a Case Study of Anglo-Norman Town Foundation in Ireland, 1194-1412" (PhD diss., Trinity College Dublin, 2009).

²⁶¹ Henry F. Berry, ed. *Statute Rolls of the Parliament of Ireland in the Reign of King Henry VI* (Dublin: 1910), 38 Henry IV, A.D. 1460., pp. 697-699.

²⁶² Westmony is an anglicised name for the port of Vestmannaeyjar on the Icelandic south coast.

they could not vend their merchandise.²⁶³ It was decided that one of the merchants, Nicholas Abbot, would remain in Iceland with his servant to sell all the goods over several months. However, Abbot's partners never returned, and the Icelanders eventually confiscated his goods. The statute was designed to review the case and decide if Abbot was due compensation. This case is interesting because it shows Ireland had connections to the Icelandic cod fishery operating at the time. The English fishery in Iceland in the fifteenth century is well understood, but we have little evidence for Irish involvement.²⁶⁴ O'Neill has suggested Galway was a hub for the supply of English vessels going to Iceland, but this statute opens the possibility other Irish towns were directly involved in transporting fish from Iceland.²⁶⁵

Just north of Drogheda is the small port of Clogherhead. Another statute from the Irish Parliament of 1475-6 refers to rebuilding the town's fishing pier. To pay for the reconstruction, every boat using the port had to pay 4 pence (*d.*) and every ship 8*d.* Additionally, every boat fishing for herring had to pay a mease of herring per year.²⁶⁶ This reference suggests there was an active herring fishery operated here in the late fifteenth century.

Further north is the market town of Dundalk. There was fishing in the town from at least 1408 when John Rowe was granted access to the waters there.²⁶⁷ The town had been a free borough since the fourteenth century, and a renewal of that right in 1465 granted the town's residents 'fishing of the water of Dundalk as amply they had ever enjoyed'.²⁶⁸ Dundalk was well-positioned to exploit spawning herring populations in this part of the Irish Sea, but we know that Carlingford, just to the north, was more heavily involved in that activity.

Carlingford town and the bay with the same name was the last outpost of the Pale and served as a significant centre for herring fishing during the fifteenth and sixteenth centuries. The town initially grew around King John's Castle that was built before 1200. Today the ruins of the tholsel and the mint (an elaborate merchant's residence), which were built in the fifteenth century, still survive.²⁶⁹ These remains suggest the fifteenth and early sixteenth centuries were extremely

²⁶³ Berry, *Statute Rolls of the Parliament of Ireland in the Reign of King Henry VI*, 38 Henry IV, A.D. 1460, p. 697.

²⁶⁴ Childs, "England's Icelandic Trade in the Fifteenth Century: The Role of the Port of Hull"; O'Neill, *Merchants and mariners in medieval Ireland*, p. 37.

²⁶⁵ *Merchants and Mariners in Medieval Ireland*, pp. 36-37.

²⁶⁶ James F. Morrissey, ed. *Statute Rolls of the Parliament of Ireland, Twelfth and Thirteenth to the Twenty-First and Twenty-Second Years of the Reign of King Edward IV* (Dublin: Stationary Office, 1939), 15 & 16 Edward IV. A.D. 1475-6, p. 389.

²⁶⁷ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry IV, Patent Roll 10, No 18, QFD ID 554.

²⁶⁸ Anngret Simms, H. B. Clarke, and Raymond Gillespie, "Dundalk", *Irish Historic Towns Atlas* 16 (2006), p. 2. & Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward IV, Patent Roll 5, no 2, QFD ID 574.

²⁶⁹ Anngret Simms et al., "Carlingford", *Irish Historic Towns Atlas* 23 (2011), p. 3.

prosperous periods for the town, and it is likely much of that prosperity came from the herring fishery. Today the town is known for its oyster beds, and there is evidence that oysters were harvested in sixteenth-century Carlingford as well.²⁷⁰ Carlingford was granted to the Earl of Kildare in 1506 but was confiscated by the English following the failed rebellion of 1534-5. In 1535, the town was visited by the English army under William Brabazon, the then Treasurer of War. He reported at that time that there were 600 English fishing boats taking part in the seasonal herring fishery.²⁷¹ Brabazon's letter will be discussed further in the following chapter, but it is a solid piece of evidence that Carlingford hosted a sizeable herring fishery in the early sixteenth century.

Just north of Carlingford is the small port town of Kilkeel, which was referred to as 'a key for fisher boats' in 1497.²⁷² Up the coast from Kilkeel is the harbour of Dundrum which was said to host 'small boats and barks' in 1497.²⁷³ Dundrum's castle was under the control of the Gaelic Irish in the early sixteenth century but was recaptured by the English in 1537.²⁷⁴ Archaeological remains from the townland of Rossglass on the shore of Dundrum Bay also provide insight into how small-scale local fisheries operated in the medieval and early modern periods. A stone fish trap used to capture fish using the tides was uncovered in the bay, one of many that have been found in County Down.²⁷⁵ The evidence suggests these traps were still in use during the sixteenth century and would have provided locals with fresh fish for consumption.²⁷⁶

Like Carlingford, the town of Ardglass, which lies just east of Dundrum, experienced a herring fishing boom in the fifteenth century. The town used the revenue from the fishery to build a raft of new structures in the early fifteenth century, including a complex with shops for merchants and a communal dining room for sailors, as well as a new tower house.²⁷⁷ From 1515 the Earl of Kildare controlled the fisheries in Ardglass and Earl's customs records show that herring and

²⁷⁰ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 223.

²⁷¹ J. S. Brewer and William Bullen, eds., *Cal. Car. MSS, Vol. 1, 1515-1574* (London: Longmans, Green, Reader, & Dyer, 1867), no. 70, p. 85, QFD ID 769; Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", pp. 61-64.

²⁷² R. P. Mahaffy, ed. *Calendar of the State Papers relating to Ireland, of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*, vol. 11 : 1601-3 (with addenda 1565-1654) (London: His Majesty's Stationery Office, 1912), p 676; List of, and notes on, the Havens of Ireland, 1497, SP 63/214 f.36, QFD ID 1469.

²⁷³ List of, and notes on, the Havens of Ireland, 1497, SP 63/214 f.36, QFD ID 1469.

²⁷⁴ Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 65.

²⁷⁵ Colin Breen, "A Medieval Fishery at Rossglass, Co. Down", *Ulster Journal of Archaeology* 58 (1999).

²⁷⁶ *Ibid.*, p. 155.

²⁷⁷ Gardiner and McNeill, "Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster", p. 15; O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 188; For more on these buildings see, Mark Gardiner, "The Late Medieval Port Buildings of Ardglass, County Down, in the Context of Northern European Trade", *Ulster Journal of Archaeology* 74 (2017-18).

white fish were commonly landed by fishing boats in the Ardglass at that time.²⁷⁸ In 1524, Ardglass and Strangford's custom's revenues were leased for £150; B. D. Quinn writes that this was an 'extensive' amount for the period.²⁷⁹ During the fifteenth century, several tower houses were constructed in the town, signalling the prosperity it gained from the fishery.

The next major fishing location along the Ulster coast was Strangford Lough. Like Ardglass, the Earl of Kildare was granted the rights to the fishing here in the early sixteenth century.²⁸⁰ An extensive archaeological survey of the lough found twenty examples of stone and wooden fish traps, mostly dating from the medieval period. There is little visual or documentary evidence relating to fish traps, but a map of south-east Ulster from 1568 has an area named 'pascafdry ennomies' on the Lough's east coast, which suggests the traps were in use at that time.²⁸¹ In a description of the Ards written in 1684 William Montgomery describes how the stone fish traps use the tides to catch fish, but also writes that 'since fish days were neglected, those yards [fish traps] decayed'.²⁸² Thomas McErlean and Aidan O'Sullivan write that Montgomery's account is solid evidence that the traps 'were abandoned by the end of the sixteenth century', and as we will see later, the fisheries in Strangford were not alone in their decline at this time.²⁸³

Gaelic Irish and Scottish clans controlled most of the coastline of Ulster in the early sixteenth century. However, many of the Scottish families had become indistinguishable from the Irish by the sixteenth century.²⁸⁴ Only Carrickfergus stood as an English outpost in Belfast Lough.²⁸⁵ There are few records detailing fishing operations in sixteenth-century Carrickfergus, although we know the town had an active fishery in the eighteenth century.²⁸⁶ There are plentiful records concerning the supply of fish to the town's garrison in the early modern period, which will be further discussed in Chapter 6.²⁸⁷ Today Belfast is the largest town in Ulster, but in 1500, it was a small outpost owned by the O'Neills.²⁸⁸ To illustrate this, Map 2.6 on the next page provides

²⁷⁸ Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 64, from *The Kildare Rental*.

²⁷⁹ *Ibid.*, p. 63.

²⁸⁰ *Ibid.*, p. 64, from *The Kildare Rental*.

²⁸¹ McErlean, McConkey, and Forsythe, *Strangford Lough: An Archeological Survey of the Maritime Culture Landscape*, pp. 146-147.

²⁸² *Ibid.*, p. 149. For an image of the map see, p. 101. The authors write this map is from 1568 and was based on a survey from 1567-1568. However, the National Archives catalog dates the map from 1580, see "Map of the coast of Ireland from Carrickfergus (County Antrim) to Dundrum Bay (County Down)", 1580 (The National Archives, Kew: MPF 1/87).

²⁸³ *Ibid.*, p. 148.

²⁸⁴ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 31.

²⁸⁵ Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 69.

²⁸⁶ Philip Robinson, "Carrickfergus", *Irish Historic Towns Atlas (IHTA)* 2 (1986), p. 6.

²⁸⁷ The first record of fishing being supplied comes from 1382, Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 5, no. 223, RCH 115/219.

²⁸⁸ The O'Neill base was destroyed by the Earl of Kildare in 1503, Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 70.

a mid-sixteenth century view of Belfast Lough. There is little more than a tower house on the site of Belfast, while boats can be seen anchored in Lough Larne and sailing around Carrickfergus on the northern shore.



Map 2.6 - Belfast Lough 1569.²⁸⁹

The fishery on the River Bann was one of the most important in Ulster and the whole of Ireland during the sixteenth century. The English Crown acquired the rights to the fishery in 1386-7 and leased it out to various owners over the following centuries. A fifteenth-century proverb indicates the English mercantile interest in the Bann fishery: 'Herring of Sligo and Salmon of Bann, had made in Bristol many a rich man'.²⁹⁰ A list of Irish havens found in the State Papers from 1497 describes the Bann as having 'salmons leaping and with nets taken afore they fall'. It also reported that ships of 40 to 60 tons were engaged in the fishery and usually took two months to get a full cargo of salmon.²⁹¹

The State Papers tell us the Bann fishery failed to generate any income in the years 1485, 1486, 1495, and 1496. However, the Earl of Kildare was granted the fishery after 1496, and it

²⁸⁹ "Map of Belfast Lough, showing Belfast, Carrickfergus, Larne Lough, and Island Magee", 1569 (The National Archives, Kew: MPF 1/77).

²⁹⁰ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 35, citing British Library, Cotton MS, Vesp. E IX, fols 101-101v. This has been corrected to modern English.

²⁹¹ Mahaffy, *Calendar of the State Papers relating to Ireland, of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*, p 676; List of, and notes on, the Havens of Ireland, 1497, SP 63/214 f.36, QFD ID 1469.

subsequently generated a substantial income for himself.²⁹² The Earl later leased the rights of the river to Otwell Corbett in 1519 for £60. However, Corbett did not pay the full rent and even received compensation back, suggesting he suffered attacks from the native Irish who also wanted to control and exploit the river's resources in this period.²⁹³ While the English Crown nominally owned the fishing rights to the river, in reality, 'the O'Neills, O'Cahans, MacQuillans, and O'Donnells controlled the Bann fisheries' in the early sixteenth century.²⁹⁴ As we will see, the river remained a site of conflict throughout the rest of the sixteenth century.

Within Ulster, the two most powerful Gaelic families in 1500 were the O'Neills and O'Donnells. The O'Neills of Tyrone controlled most of central Ulster, while the O'Neills of Clondeboy held the coastlines of modern Down and South Antrim. Salmon was part of the O'Neill identity; the insignia of the family was the red hand of Ulster with a salmon underneath it, a faint outline of which can be seen in the seal of a letter sent by O'Neill in 1591 shown in Figure 2.1 below.



Figure 2.1 – Letter seal, with the O'Neill, hand, stars, and salmon, 1591.²⁹⁵

Most of northern Antrim was controlled by the MacQuillans, whose ancestors had come from Scotland. Another Scottish family, the MacDonnells, controlled the Glens of Antrim on the east coast of Ulster. Most of modern County Derry/Londonderry was in the hands of the O'Cahan clan, while the O'Dohertys controlled the Inishowen peninsula. The remainder of the coast, roughly the area of modern Donegal, was controlled by the O'Donnells and their MacSweeney vassals.²⁹⁶ The MacSweeney clan also traced their heritage to Scotland but had essentially become Gaelic Irish lords by the sixteenth century.²⁹⁷

²⁹² Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 67.

²⁹³ Ibid., p. 67.

²⁹⁴ Audrey J. Horning, "On the Banks of the Bann - The Riverine Economy of an Ulster Plantation Village", *Historical Archaeology* 41, no. 3 (2007), p. 95.

²⁹⁵ Hugh Earl of Tirone to the Privy Council, 31 Oct 1591, SP 63/160 f.126, QFD ID 1125.

²⁹⁶ Moody, Martin, and Byrne, *A New History of Ireland*, pp. 15-17.; Egan, "By Land and by Sea: The Role of the Maritime Sphere in the Expansion of O'Donnell Power ca. 1380–1500"; Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland".

²⁹⁷ Colin Breen, "Maritime Connections: Landscape and Lordship along the Gaelic Atlantic Seaboard of Scotland and the North of Ireland during the Middle Ages", *Maritime Communities of the North Atlantic Arc in the Early Modern Period Journal of the North Atlantic Special Volume* 12 (2019), p. 9.

Gaelic Ireland did not have urban centres comparable to the Anglo-Norman settlements of Ireland, but it did have tower houses that acted as centres of power, administration, and trade. Colin Breen and Aidan O'Sullivan argue that tower houses need to be viewed as 'working buildings, oriented towards marine economies' they inhabited.²⁹⁸ In that respect, the placement of these tower houses can help us unravel the marine resources that were important to coastal communities in sixteenth-century Ireland. Marine resources do seem to have been important to the economy of the O'Donnells in north Donegal. An assessment of tower house placement in the O'Donnells' land suggested the majority were positioned in proximity to the sea or navigable rivers.²⁹⁹ For example, the plantation town of Londonderry would later become a major exporter of salmon, but in the sixteenth century, an O'Donnell tower house stood to keep control over the river.³⁰⁰ The same is true in other parts of the coast; for example, the tower house at Carlingford was positioned towards the sea to facilitate the storage of herring catches.³⁰¹

A later English survey from 1608 catalogues the fisheries along the coast from Derry to Ballyshannon, showing a diverse range of fishing locations in this area with salmon, herring and ling (*Molva molva*)³⁰² as the main targets.³⁰³ The modern Donegal Town was the site of the largest O'Donnell castle, constructed in 1474-5 and, in 1608, reported to hold a weekly market.³⁰⁴ Closer to the shore of Donegal Bay, the O'Donnells had another castle, which was described in 1601 as the place 'where the ships used to ride'.³⁰⁵ In many respects, the O'Donnell infrastructure in Donegal town acted as a town, but unfortunately, much of the written material that describes it is retrospective in nature.

It seems likely too that Ballyshannon was a centre for fishing. Records from later in the sixteenth and seventeenth centuries tell us that the River Erne held an extensive salmon and eel fishery.³⁰⁶ In 1539, there was a report from a Galway merchant who had travelled to O'Donnell's country with a ship full of wine. He was relaying intelligence about an impending attack by

²⁹⁸ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 164.

²⁹⁹ Máire Ní Loingsigh, "An Assessment of Castles and Landownership in Late Medieval North Donegal", *Ulster Journal of Archaeology* 57 (1994), p. 148.

³⁰⁰ Hunter and Scott, *The Ulster Port Books, 1612-15*; Avril Thomas, "Derry-Londonderry", *Irish Historic Towns Atlas* 15 (2005), p. 2.

³⁰¹ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 164.

³⁰² "Species Dashboard, Ling (*Molva molva*).", (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

³⁰³ J. S. Brewer and William Bullen, eds., *Cal. Car. MSS, Vol 5, 1603-1625* (London: Stationery Office, 1873), no. 4, pp. 13-22.

³⁰⁴ Gardiner and McNeill, "Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster", p. 26.

³⁰⁵ *Ibid.*, p. 26.

³⁰⁶ Went, "Fishing Weirs of the River Erne".

O'Neill in the Pale. He also mentions that a ship from Bristol was currently at Assaroe and that it would 'stay two months getting salmon'.³⁰⁷ Assaroe was the name of the local abbey and waterfall near Ballyshannon.³⁰⁸ The merchant reported that the master of the Bristol ship also spoke Irish, which suggests this was a regular practice for him. This report shows us that merchants, familiar with the area and language, came to O'Donnell territory in the sixteenth century.

West of Ballyshannon across Donegal Bay, the O'Donnells held another castle at Killybegs, known as McSwyne Banagh. Today Killybegs is by far the largest fishing port in Ireland, landing around 122,000t of fish per year, compared to 24,000t from the next largest port, Castletown-Bearhaven.³⁰⁹ Some of the most important commercial species in Ireland today, such as mackerel (*Scomber scombrus*)³¹⁰ and horse mackerel (*Trachurus trachurus*)³¹¹, are caught in large numbers on the continental shelf edge off the west coast and landed in Killybegs.³¹² Species on the continental shelf were out of the reach of early modern fishers, but there are large herring spawning areas close to shore in the west and north of Donegal that were accessible to fishers in the sixteenth century.³¹³

The earliest mention of herring fishing in the region found for this study comes from 1543. That year, Manus O'Donnell granted away several rights to his lands and marine resources to Henry VIII. This included a promise that 'if a multitude of herrings and other fish called "garbhushe"³¹⁴ should resort to the country of Lord O'Donnell or to his sea, such as now comes into Arayn or Ynisnycadrynn, one half thereof shall belong to the King and the other to O'Donnell'.³¹⁵ This entry suggests that herring were not always present on the Donegal coast. However, when

³⁰⁷ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 470.2, p. 236, QFD ID 752.

³⁰⁸ Went, "Fishing Weirs of the River Erne", p. 213.

³⁰⁹ Gerritsen and Kelly, *Atlas of Commercial Fisheries around Ireland, Third Edition*, p. 6.

³¹⁰ "Species Dashboard, Mackerel (*Scomber scombrus*).\" (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

³¹¹ "Species Dashboard, Horse Mackerel (*Trachurus trachurus*).\" (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

³¹² Gerritsen and Kelly, *Atlas of Commercial Fisheries around Ireland, Third Edition*, p. 42; L. Dransfeld et al., "North Western Waters Atlas 3rd Edition" (Oranmore: Marine Institute, Ireland, 2014).

³¹³ David O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds", *Marine Institute, Irish Fisheries Bulletin* 42 (2013) , p. 21.

³¹⁴ "Garbhushe" is an Irish name for shad (*Alosa fallax*), Murray writes 'Shad was, by the older naturalists, styled the mother of herrings', J. Murray, ed. *State Papers, King Henry the Eighth, Part III - Continued, 1538-1546.*, State Papers Published Under the Authority of His Majesty's Commission, Vol III, King Henry the Eighth (London: Great Britain. Record Commission, 1834), p. 590 ; for more info on shad see, "Alosa fallax (Lacepède, 1803) Twaite shad." (Fishbase.org, 2020) <https://www.fishbase.se/summary/Alosa-fallax.html>.

³¹⁵ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 182, pp. 208-209, QFD ID 1623.

they were available, they were targeted by fishers in the region. Based on this account, the herring fishery was more active in 'Arayn', or the Aran Islands, at this time.

South of Ballyshannon is the town of Sligo, located at the junction between Ulster and Connacht. This position meant it was a flashpoint for conflict over the centuries as it changed hands between the O'Donnells and the O'Connors of Sligo, who controlled the town in 1500.³¹⁶ Sligo built its first quay in 1423 and covered its expense through collecting customs taxes.³¹⁷ Goods exported from Sligo in the fifteenth century included herring and other generic 'fish'.³¹⁸ As mentioned earlier, the English saying, 'Herring of Sligo and Salmon of Bann', further suggests there was an active herring fishery there and a trading connection to Bristol. In 1400, a licence was issued for a Bristol merchant to travel to Sligo with 20 tons of old wine and exchange it for salmon.³¹⁹ There is another record from the 1450s of a ship going from England to Lisbon to collect salt and then onwards to Sligo to pick up hides.³²⁰ This entry makes no explicit mention of fish, but we could speculate that the salt being brought to Sligo to process fish.

There is unfortunately little evidence for fisheries in Sligo during the sixteenth century, but it does seem clear that the town's prosperity was damaged during the century as it became increasingly embroiled in conflict.³²¹ However, a later English survey of the coast of Connaught from 1614 reported that a ship of 200 tons could lay in Sligo Bay and the area had 'excellent fishing for cod and ling without, and salmon within'.³²² Export figures from 1621-2 also show small amounts of salmon and pilchards (*Sardina pilchardus*)³²³ exported from the town at that time.³²⁴

Moving further south, the coastline directly south of Sligo was controlled by the Gaelic Irish O'Dowds. Colin Breen and John Raven suggest that because this coastline had limited landing places but rich inland agriculture, the O'Dowds may not have engaged with the sea as much as other Gaelic families.³²⁵ The northern coast of Mayo was dominated by the Old English

³¹⁶ Fíona Gallagher and Legg Marie-Louise, "Sligo", *Irish Historic Towns Atlas* 24 (2012), p. 1.

³¹⁷ *Ibid.*, p. 1.

³¹⁸ Mary O'Dowd, "Landownership in the Sligo area, 1585–1641" (PhD diss., University College Dublin, 1979), p. 52.

³¹⁹ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 39.

³²⁰ E. M. Carus-Wilson, ed. *The Overseas Trade of Bristol in the Later Middle Ages* (Bristol: Bristol Record Society, 1937), pp. 106-107.

³²¹ Gallagher and Marie-Louise, "Sligo", p. 2.

³²² Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 152, p. 297, QFD ID 940.

³²³ "Sardina pilchardus (Walbaum, 1792) European pilchard." (Fishbase.org, 2020) <https://www.fishbase.se/summary/sardina-pilchardus.html>.

³²⁴ These will be fully explored later, Woodward, "Irish Trade and Customs Statistics, 1614-1641".

³²⁵ Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 169.

Lower MacWilliam Burke family, while the Gaelic Irish O'Malleys occupied the south coast.³²⁶ We know very little about the maritime activities of the Burkes, but we do know the O'Malleys had a strong maritime tradition and a reputation for piracy.³²⁷ The O'Malley tower houses on Clare Island and in Clew Bay were both well-positioned to control access to the sea, which suggests this is where the clan's focus lay.³²⁸

The soil in this part of the Mayo coast is poor, so it is not surprising the O'Malleys looked to the sea for resources. The area is also dotted with many islands, including Achill, Inisturk and Inishbofin. The 1614 English survey of Connaught described Inishbofin as 'good fishing for cod and ling, and it is much frequented by his Majesty's subjects and others'.³²⁹ Similarly, Inisturk is described as having fishing for cod and ling, and 'is much haunted by the English and Dutch'.³³⁰ While Clew Bay was described as having very good fishing, Inishkea South was said to have the 'best and most plentiful fishing of all the west of Ireland'.³³¹

This account is problematic in some ways; it was written over 100 years after the study period under consideration here, so it is not clear how well the situation described in 1614 reflected what existed in 1500. Furthermore, the point of the survey was to promote and encourage English plantation in Connaught, with the author, Sir Oliver St John, providing suggestions on where forts could be strategically placed to achieve control of the province. It was to St John's benefit to exaggerate the fishing potential of the area to give his scheme a better chance of becoming policy. However, despite all this, St John's description shows there was potential for fisheries on this coast, and it is very feasible that the O'Malleys exploited these waters in the sixteenth century and taxed fishers who travelled from elsewhere to exploit these waters. As we shall see later, the facilitation and taxation of visiting fisheries were common practices among other Gaelic Irish families in the sixteenth century.

South of Mayo, most of the modern coast of County Galway was controlled by the independent O'Flaherty family. The O'Flahertys had been known for their naval strength in the medieval period, but this prowess at sea had waned by the sixteenth century.³³² Breen and Raven note that the O'Flahertys had two main concentrations of tower houses, one inland and one along the coast. The coastal towers were positioned in mostly hard-to-reach inlets, which suggests the clan were expert navigators and would have increased the defensive capabilities of the

³²⁶ Moody, Martin, and Byrne, *A New History of Ireland*, p. 14.

³²⁷ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 165.

³²⁸ Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 169.

³²⁹ Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 152, p. 297, QFD ID 933.

³³⁰ *Ibid.*, no. 152, p. 297, QFD ID 935

³³¹ *Ibid.*, no. 152, p. 297, QFD ID 937.

³³² Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 157.

sites.³³³ In terms of fishing, we know little about the O'Flahertys, but given their skills at sea, we can assume they did engage in fishing.

Of all the west coast islands, the strongest evidence for fisheries is on the Aran Islands, located just outside Galway Bay. In 1379, the rights to fish on the Aran Islands was granted by the King to an English noble, Theobald Verdun.³³⁴ As Norman power declined in the following centuries, the islands came back under Irish control and were in the hands of the O'Brian family in 1500. The islands were strategically important to controlling trade entering and departing the port of Galway and, in the early sixteenth century, the O'Brians kept the bay clear of pirates in exchange for a yearly tribute of wine from Galway.³³⁵

Like other locations on the west coast, the islands were visited by continental fishers in the early modern period. For instance, in 1511, a ship left the Basque Country and went to La Rochelle to pick up salt. From there, it then travelled to the Aran Islands where it used six smaller boats for 'fishing hake and one for killing sardines'.³³⁶ The mention of sardines is interesting as the fish are not always present on the Irish coast.³³⁷ The record from 1543 mentioned earlier also tells of herring present off the islands in that year.³³⁸ Sir Oliver St John also wrote in 1614 that 'English, Bretons and Portugalls (in times past) had a great trade of fishing here for cod, ling, hake, and conger' on the islands.³³⁹ So, in this case, St John's report is supported by other evidence, and it does seem likely foreign fishers visited the islands.

East of the Aran Islands at the head of Galway Bay lies Galway town. Galway was an important trading post and independent Old English town in 1500, perhaps the most detached from the central government in Dublin. It was the second-largest city in Ireland, with our earliest population estimates starting in 1600 at 4,000 residents.³⁴⁰ Galway had strong trade connections to continental Europe in the sixteenth century, and due to generous charters, the

³³³ Ibid., pp. 167-168.

³³⁴ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 2, no. 9, QFD ID 515.

³³⁵ O'Neill, *Merchants and mariners in medieval Ireland*, p. 127.

³³⁶ Barkham, "The Spanish Basque Irish Fishery & Trade in the Sixteenth-Century", p. 14.

³³⁷ This will be discussed further in Chapter 6, Liam Downey and Ingelise Stuijts, "Historical Fisheries: Irish Pilchard Fishery and Historical Fish Harvesting and Processing Methods, Fish Products and Consumption", *Kerry Archaeological & Historical Journal* 2, no. 14 (2014); A. E. J. Went, "The Irish Pilchard Fishery", *Proceedings of the Royal Irish Academy* 51 (1946).

³³⁸ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 182, pp. 208-209, QFD ID 1623.

³³⁹ *Cal. Car. MSS, Vol 5, 1603-1625*, no. 152, p. 296, QFD ID 932.

³⁴⁰ Anthony Sheehan, "Irish Towns in a Period of Change, 1558-1625", in *Natives and Newcomers: Making of Irish Colonial Society, 1534-1641*, ed. Ciaran Brady and Raymond Gillespie (Dublin: Irish Academic Press, 1986).

town kept most of the revenue from its trade.³⁴¹ This connection to continental Europe has left its mark on the city today with its Latin Quarter and Spanish Arch.³⁴² Among the records of the English Admiralty Court, we find merchants from Galway engaging in voyages to every part of Europe.³⁴³ These voyages do not always originate from Galway, but they show that Galway had strong links to other European ports. Similar to Drogheda, a customs list from Galway in 1395 contains a wide array of exotic goods, as well as several fish species including cod, herring, eel, whiting (*Merlangius merlangus*).³⁴⁴ and salmon by the individual fish and pipe.³⁴⁵

The available archaeological evidence indicates there was a wide array of marine species present in medieval and early modern Galway. These include shark and ray, herring, cod, and gurnard (*Eutrigla gurnardus*).³⁴⁶ The town also had an important freshwater fishery in both Corrib Lough and River. These provided an abundance of salmon, trout (*Salmo trutta*) and eel that were sold in the market three times a week.³⁴⁷ The salmon fishery was important from the fourteenth century, when several Chancery records refer to its granting to Richard Panys, Burgess of Bristol.³⁴⁸ Shortly after, two burgesses native to Galway were ordered by the King to stop interfering in the fishery, indicating its importance to the Crown.³⁴⁹ The rights to the salmon fishery continued to be granted and rented out in the sixteenth century, with three fishing spots being rented to Jenet Lynch in 1521 for 10 shillings (s.) per year.³⁵⁰ Barnaby Googe drew one of the earliest maps of Galway in 1583 (See Map 2.7 on the next page). The map shows salmon fishing taking place from the town's bridge, with both nets and spears being

³⁴¹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 13., Sheehan, "Irish Towns in a Period of Change, 1558-1625", p. 95.

³⁴² See, "Placenames Database of Ireland." (Fiontar & Scoil na Gaeilge [DCU] and The Placenames Branch [Department of Culture, Heritage and the Gaeltacht], 2020) <https://www.logainm.ie/en/>.

³⁴³ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, see for example, no. 16, p. 3; no. 55, p. 11; no. 122, p. 23; no. 247, p. 49; no. 254, p. 52; no. 260, p. 53; no. 275, p. 57; no. 278, p. 58; no. 407, p. 88; no. 429, p. 94; no. 721, p. 166; no. 722, p. 166.

³⁴⁴ "Species Dashboard, Whiting (*Merlangius merlangus*).\" (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

³⁴⁵ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 19, no. 4, QFD ID 513.

³⁴⁶ Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland", p. 235; <https://www.fishbase.se/Summary/SpeciesSummary.php?ID=68&AT=Grey+Gurnard>.

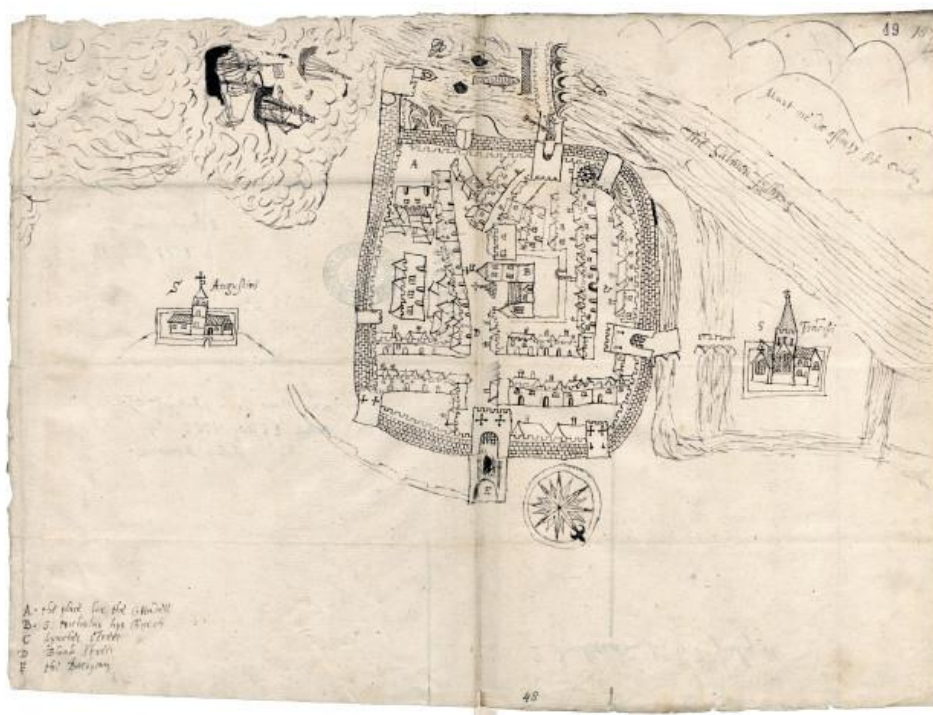
³⁴⁷ "Salmo trutta (Linnaeus, 1758) Sea trout." (Fishbase.org, 2020) <https://www.fishbase.se/summary/Salmo-trutta.html>; M. D. O'Sullivan, *Old Galway* (Cambridge: Heffer & Son, 1942), p. 403.

³⁴⁸ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 10, no. 32, RCH 131/29.; Richard II, Patent Roll 10, no. 104, RCH 133/85.

³⁴⁹ Ibid., Richard II, Patent Roll 10, no. 105, RCH 133/85, QFD ID 530.

³⁵⁰ O'Sullivan, *Old Galway*, p. 409.

employed by the fishers. Figure 2.2 then shows a close view of the fishing taking place. Arthur Went has conducted a full exploration of the methods used in the Galway salmon fishery.³⁵¹



Map 2.7 – 'A plot of the towne of Galway', 1583, by Barnaby Googe.³⁵²



Figure 2.2 – Excerpt from – 'A plot of the towne of Galway'.

Despite Galway's thriving salmon fishery, there is little evidence for a large-scale export of fish; perhaps, like Dublin, the population consumed much of the fish caught locally. No customs accounts or ports books have survived for sixteenth-century Galway. Later customs statistics from 1621-2 show a small export of salmon and pilchards, but far less when compared to other

³⁵¹ A. E. J. Went, "The Galway Fishery. An Account of the Ownership of the Fishery", *Proceedings of the Royal Irish Academy* 48 (1942); "The Galway Fishery. An Account of the Modes of Fishing Together with Notes on Other Matters Connected with the Fishery", *Proceedings of the Royal Irish Academy. Section C* 49 (1943).

³⁵² Barnaby Googe, "A Plot of the Towne of Galway", 1583 (TNA: SP 63 103 18 III).

ports like Limerick or Wexford.³⁵³ Galway clearly had an active salmon fishery and consumed a wide variety of fish, but too few records remain to estimate the scale of these activities.

South of Galway, the coast of Clare is imposing and provides few access points to the ocean. However, the Gaelic O'Loughlin Burren built a series of tower houses along this coast. The tower house near Pouldoody was positioned by a prominent oyster fishery, which suggests once again that the physical infrastructure of the O'Loughlins was in part placed to control marine resources.³⁵⁴ Further south along the coast is the port town of Limerick, located close to where the River Shannon runs into the 113km-long Shannon Estuary.³⁵⁵ Originally a Viking town, Limerick was further developed by the Normans and, by the sixteenth century, it was, like Galway, an independent port town surrounded by Irish and Old English lords. Limerick was the third largest town in Ireland in the sixteenth century with a population of 3,000 by 1600.³⁵⁶ Map 2.8 on the following page shows a view of Limerick in 1587. The maritime character of the city is clear from the variety of boat types found in the river around it. The archaeological evidence further suggests the town experienced a period of prosperity and a building boom in the fifteenth century.³⁵⁷ While we cannot be sure, this growth may have been related to the expansion of fisheries in the same period.³⁵⁸

Like Galway and the Corrib, Limerick had an important salmon fishery on the Shannon. Most of the records we have relating to fisheries concern the granting and protection of the cities extensive network of weirs. For example, in 1496, the Earl of Desmond was granted all profits of 'fishing weirs' and 'fisheries' of the city.³⁵⁹ A similar grant was re-issued in 1497.³⁶⁰ The town does not often appear in the English or Welsh customs accounts or port books, as it likely had better trading connections to continental Europe. Records from the late sixteenth century indicate a small trade of salmon from the city to Spain and elsewhere. For example, in 1598, the *Phoenix* was freighted in Limerick with various goods, including one barrel of salmon, for a voyage to Spain.³⁶¹ Customs records from 1616-17 show that the only fish the town exported in that period was 77 tons of salmon.³⁶²

³⁵³ Woodward, "Irish Trade and Customs Statistics, 1614-1641", p. 70.

³⁵⁴ Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 167.

³⁵⁵ Eamon O'Flaherty, "Limerick", *Irish Historic Towns Atlas (IHTA)* 21 (2010), p. 1.

³⁵⁶ Sheehan, "Irish Towns in a Period of Change, 1558-1625", p. 97.

³⁵⁷ O'Flaherty, "Limerick", p. 4.

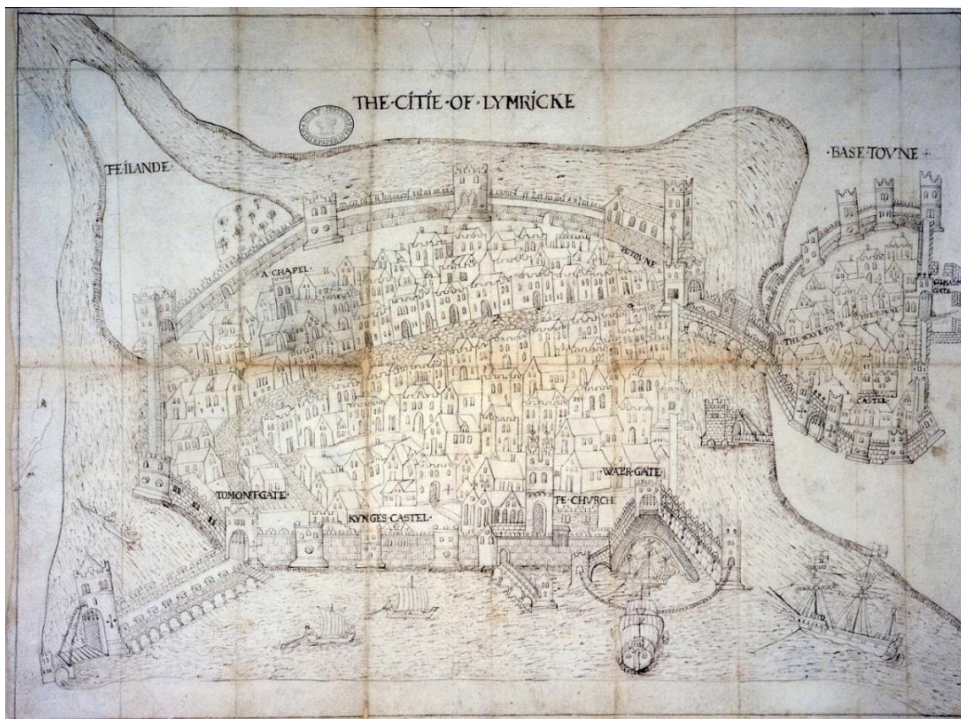
³⁵⁸ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 36.

³⁵⁹ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry VII, Patent Roll 12, no. 1, QFD ID 576.

³⁶⁰ *Ibid.*, Henry VII, Patent Roll 12, no. 4, QFD ID 577.

³⁶¹ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, p. 94, no. 431.

³⁶² Woodward, "Irish Trade and Customs Statistics, 1614-1641", p. 68.



Map 2.8 – Limerick, Co Limerick 1587.³⁶³

While Shannon itself had few marine fisheries, the Shannon Estuary was a major centre of fishing in the medieval and early modern period. As mentioned earlier, the river and its estuary were the most frequently mentioned site in the Chancery records. Archaeologists have found the remains of wooden post and wattle fish traps in the Shannon estuary dating from the 5th century at the earliest, although the use of these structures seems to have peaked from the 11th to 14th centuries. These traps worked by funnelling fish into baskets where they could be collected by hand. Aidan O’Sullivan writes that the traps could be used to make large catches of ‘salmon, sea trout, lampreys, shad, flounder and eels’.³⁶⁴ The catches made in the estuary could have supplied the local population with fish, but they could have also been preserved and sold at markets in Limerick or exported from the town’s port.³⁶⁵

There is also evidence for active sea fisheries in the area. A statistical survey of County Clare from 1808 refers to a grant by Queen Elizabeth to the City of Limerick to the rights of a herring fishery on Scatterry Island, which lies near the mouth of the Shannon estuary. It stipulated that the city would get ‘from every herring boat, 500 herrings once a year’.³⁶⁶ Unfortunately, the

³⁶³ Francis Jobson, "The Plotte of the Citie of Limbrick", 1587 (TNA: MPF 1/96).

³⁶⁴ O’Sullivan, *Medieval Fish Traps on the Shannon Estuary*, p. 70. Arthur Went has also outlined the use of head wineries in the Shannon Estuary, A. E. J. Went, "Historical Notes on the Fisheries of the Estuary of the River Shannon", *The Journal of the Royal Society of Antiquaries of Ireland* 111 (1981), pp. 107-109.

³⁶⁵ O’Sullivan, *Medieval Fish Traps on the Shannon Estuary*, p. 71.

³⁶⁶ *Ibid.*, p. 113; Hely Dutton, *Statistical Survey of the County of Clare: With Observations on the Means of Improvement* (Dublin: Graisberry and Campbell, 1808), p. 338.

original record that provided this account has not survived, and the 1808 text provides no reference.³⁶⁷ However, this record suggests that there was an active herring fishery in the estuary during the sixteenth century.

Limerick and the Shannon lay in the province of Munster, which was the most densely populated province in sixteenth-century Ireland and possessed some of the best marine resources.³⁶⁸ In addition to the major ports and fishing locations covered in this overview, the Munster coastline is dotted with a multitude of smaller bays, islands, and landing places that ships could employ. Map 2.9 on the following page, was drawn in 1587, and gives an abstract view of the Munster coast with a short description of approximately twenty different landing places.³⁶⁹ Most of north-west Munster was dominated by the powerful Old English Earls of Desmond. English surveys of land taken in the later sixteenth century show a wide range of fishing sites in the Desmond lands, ranging from salmon fisheries at Askeaton, the Desmond capital, to sea fisheries on Valentia Island.³⁷⁰ Chapter 5 has a full analysis of the fishing sites found in the Desmond Surveys.

The town of Dingle lay at the westward extent of the Earl of Desmond's territory. The town had an active merchant community and strong trading connections to continental Europe in the sixteenth century.³⁷¹ A record from Bordeaux in 1534 gives details about a fishing voyage to the town. The *Isabella de Losquirec* was chartered in Bordeaux for a voyage to Dingle carrying wine. When the ship reached Dingle, the wine was unloaded, and the ship set about fishing on the coast before sailing back to La Rochelle with any catches. Many of the ships that sailed to Ireland were Breton and combined both trading and fishing. Like the *Isabella de Losquirec*, they would carry cargo to Ireland and then spend a period fishing on the Irish coast before returning home.³⁷²

³⁶⁷ *Statistical Survey of the County of Clare: With Observations on the Means of Improvement*, p. 338.

³⁶⁸ Sheehan, "Irish Towns in a Period of Change, 1558-1625", p. 95.

³⁶⁹ "Map of the coast of Munster from Kinsale (County Cork) and Dingle (County Kerry)", 1587 (The National Archives, Kew: MPF 1/100).

³⁷⁰ John A. Murphy, ed. *The Desmond Survey* (Cork: CELT: Corpus of Electronic Texts, 2013), <https://celt.ucc.ie/published/E580000-001/index.html>.

³⁷¹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 12.

³⁷² Jacques Bernard, "The Maritime Intercourse Between Bordeaux and Ireland, c. 1450 - 1520", *Irish Economic and Social History* 7 (1980), p. 15.

but the most frequented ports were Waterford and Youghal, followed by Cork and Kinsale.³⁷⁶ Dingle had connections to Spain too, with some of the older architecture of the town said to be in the Spanish style.³⁷⁷ In 1567, John Denton wrote that the town had 'plentiful fish and the great commodity the Spaniards there have, by which, the queen loses her customs'.³⁷⁸ Again this record could have been an exaggeration, but it does suggest that the Spanish were using that part of the coast for fisheries in the sixteenth century.

Gaelic Irish lords controlled much of the remaining coast of southern Munster. In the south-west of Munster, the dominant family was that of MacCarthy Mór. Similar to the west coast, the soil quality was poor here, so the families looked to the sea for wealth. As mentioned earlier, today Castletown-Bearhaven is the second largest fishing port in Ireland by volume landed.³⁷⁹ Castletown-Bearhaven is located on the southern coast of the Beara Peninsula just south of Bere Island. In the sixteenth century, the area was known as Berehaven and was controlled by the O'Sullivan Beare clan, vassals of the MacCarthy Mór.³⁸⁰

The prominence of Berehaven as a fishing location stretches back into the sixteenth century, as it was one of the most frequently mentioned fishing locations across the sources analysed for the QFD. As discussed in the introduction, Colin Breen has written on the Gaelic Lordship of O'Sullivan Beare and used documentary evidence to highlight the vital role visiting fishers played in the area's maritime economy.³⁸¹ Breen notes that the tower houses at Dunboy, Whiddy and Ardea around Berehaven are all positioned overlooking fishing grounds out at sea, which indicates the importance of the sea to their economy.³⁸² A map of Berehaven and Bantry Bay from 1558 further illustrates the maritime activity in the area (Map 2.10). On this map, we can see galleys around Berehaven and larger sailing ships further out in the bay. The O'Sullivan Beare used the galleys to control and protect the visiting fishers who frequented their waters.

³⁷⁶ Dublin, Drogheda, and Limerick were further behind, *ibid.*, p. 16.

³⁷⁷ Richard Hitchcock, "Dingle in the Sixteenth Century. With an Introduction and Notes", *Transactions of the Kilkenny Archaeological Society* 2 (1852), pp. 133-134.

³⁷⁸ Cunningham, C.S.P. *Ire.*, *Tudor Period 1566-1567*, no. 345.1, p. 155.

³⁷⁹ Gerritsen and Kelly, *Atlas of Commercial Fisheries around Ireland, Third Edition*, p. 6.

³⁸⁰ Moody, Martin, and Byrne, *A New History of Ireland*, p. 11.

³⁸¹ Breen, *The Gaelic Lordship of the O'Sullivan Beare*, pp. 113-121.

³⁸² *Ibid.*, p. 116.



Map 2.10 - Bantry Bay, Co Cork & Co Kerry 1558.³⁸³

The next major fishing location in south Munster was Baltimore, which was also controlled by a Gaelic Irish family, in this the case O'Driscolls, who were vassals of the MacCarthy Reagh.³⁸⁴ The O'Driscoll castle on Sherkin Island gave the area its name, 'baile an tí mhóir' (Baltimore) or 'town of the great house'.³⁸⁵ The castle itself was firmly positioned to control the bay and its marine resources.³⁸⁶

Like Berehaven, Baltimore was a major centre for both local and distant water fisheries and early evidence for the presence of foreign fishers in Irish waters can be found in a statute from 1450. In that year, citizens from Wexford, Waterford, Youghal, Cork, Kinsale, 'or any other liege

³⁸³ "Map of area in County Cork and County Kerry, Ireland, around Bantry Bay. Shows Kenmare", 1558 (The National Archives, Kew: MPF 1/94).

³⁸⁴ Moody, Martin, and Byrne, *A New History of Ireland*, p. 10.

³⁸⁵ Cindy Valler, "Baltimore, Ireland 20 June 1631." (Pirates And Privateers, 2014) <http://www.cindyvaller.com/Baltimore.html>.

³⁸⁶ For a local history of the O'Driscolls see; Éamon Lankford, *O'Driscolls Past and Present* (Cork: Cape Clear Museum, 2005).

people', were banned from fishing at Baltimore because it was claimed Flynn O'Driscoll, the Lord of Baltimore, had killed some English subjects.³⁸⁷ It does not state how or why O'Driscoll committed these crimes, but this entry shows that a wide array of fishers from elsewhere in Munster travelled to the O'Driscolls' territory to make catches. And not only did Irish fishers visit the area, but there is also ample evidence for the presence of continental fishers, mainly from Spain and France.³⁸⁸ The connection to Spain remains in the area, as the island directly north of Baltimore is known as Spanish Island.³⁸⁹ The complex system by which the O'Driscolls generated income from these visiting fishers is outlined in an inquisition taken in 1609.³⁹⁰ The full extent of taxes imposed by the clan will be explored in the next chapter. However, overall, the sophistication of the system indicates that the clan were economically well adapted to their surroundings. Connie Kelleher writes that this ability to 'adapt and conform' to their environment allowed the O'Driscolls to remain independent for longer than many other Gaelic clans.³⁹¹

The stretch of coastline from Baltimore to Wexford was probably the most active fishery region in Ireland. The reasons for this are a mixture of political, geographic, and ecological in nature. This region has the closest sea connections to important ports in both England and the continent, facilitating trade to those regions. Most of the port towns of the region had Norman roots, which meant they possessed the technology and connections to trade further afield. That Norman heritage has also meant we have comparatively more quantitative information about trade in this region, due to the survival of English port books and customs accounts.³⁹² Today large catches of cod, haddock (*Melanogrammus aeglefinus*)³⁹³, hake, herring, ling are made in or near this region of the coast.³⁹⁴ This area also has the highest concentration of herring spawning grounds in Ireland.³⁹⁵ The confluence of geographic and ecology made this coastline ideal for early modern fisheries. Fish were abundant close to shore and in reach of smaller craft that could not fish in the open sea.

³⁸⁷ Berry, *Statute Rolls of the Parliament of Ireland in the Reign of King Henry VI*, 28 Henry VI. A.D. 1450, X, pp. 191-193.

³⁸⁸ Barkham, "The Spanish Basque Irish Fishery & Trade in the Sixteenth-Century".

³⁸⁹ See, "Placenames Database of Ireland", <https://www.logainm.ie/en/>.

³⁹⁰ John O'Donovan, ed. *The Genealogy of Corca Laidhe* (Cork: CELT: The Corpus of Electronic Texts, 2011), <https://celt.ucc.ie/published/T105009/header.html>.

³⁹¹ Connie Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century* (Cork: Cork University Press, 2020), p. 71; "The Gaelic O'Driscoll Lords of Baltimore", in *Lordship in Medieval Ireland, Image and Reality*, ed. Linda Doran and James Lyttleton (Dublin: Four Courts Press, 2007), pp. 139-142.

³⁹² These will be explored in full in the following chapter.

³⁹³ "Species Dashboard, Haddock (*Melanogrammus aeglefinus*).\" (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

³⁹⁴ Gerritsen and Kelly, *Atlas of Commercial Fisheries around Ireland, Third Edition*.

³⁹⁵ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds".

Along the coast from Baltimore, Kinsale was the next major fishing location in the sixteenth century. The two towns' fishing enterprises were also connected, as they jointly elected a fishing admiral every year in the fifteenth and early sixteenth centuries.³⁹⁶ However, in contrast to Baltimore, Kinsale was not Gaelic Irish but a chartered English town. Kinsale was also closely connected to Cork and acted as a satellite port for the city but had a strong mercantile community of its own as well.³⁹⁷ The council book of the town has survived, and while it covers mostly a later period, it contains some details about port operations from the fifteenth and sixteenth centuries. The book illustrates that Kinsale was a centre for the collection of customs and had trade connections to the continent.³⁹⁸ Several entries also refer to the presence of foreign fishers in the town in the later sixteenth century.³⁹⁹

Further up the coast, Cork was one of the largest towns in Ireland in the sixteenth century, with an estimated population of 2,400 people in 1600.⁴⁰⁰ Cork was an English mercantile town and received its charter directly from the English Crown.⁴⁰¹ Cork is located at the end of one of the best natural harbours along the coast of Ireland. For its size, we know comparatively little about the operation of the city or its fisheries from the early sixteenth century. Some of the early Chancery records from the thirteenth century reference the purchasing of fish in Cork to supply the English army in Scotland.⁴⁰² This shows that the town had an active market and close connection to England in that period. An entry from the state papers from 1549 also provides some details about the town's trade in fish. The entry requests that the custom searchers from the town do not interfere with a Spanish ship freighted in Cork with 'hides, fish, frieze mantles, flocks and a little flesh, butter and tallow, to bring back Spanish wines'.⁴⁰³ While this is just one example, it is indicative of a larger trade that likely existed, but about which we have few records remaining. Cork also had strong trade connections to Bristol in the early sixteenth century, as did many of the ports on the south-east coast, and such will be explored further in Chapter 4.

Further along the coast from Cork was the comparatively smaller but important fishing and trading town of Youghal. The town was under the influence of the Earls of Desmond in the early sixteenth century and lies at the mouth of the Blackwater river system which gave the town

³⁹⁶ O'Donovan, *The Genealogy of Corca Laidhe*.

³⁹⁷ Moody, Martin, and Byrne, *A New History of Ireland*, p. 10.

³⁹⁸ Caulfield, *The Council Book of the Corporation of Kinsale*, see for example Henry V, 24 July 1415, p. xiii.

³⁹⁹ *Ibid.*, p. xx.

⁴⁰⁰ Sheehan, "Irish Towns in a Period of Change, 1558-1625", p. 96.

⁴⁰¹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 10.

⁴⁰² Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Edward I, Patent Roll 27, no. 3, QFD ID 483.

⁴⁰³ Lennon and Irish Manuscripts Commission, *Calendar of state papers, Ireland, Tudor period 1547-1553*, no. 191, p. 54, QFD ID 595.

deep inland connections too.⁴⁰⁴ The Blackwater is also one of the most abundant salmon rivers in Ireland, and Arthur Went has written about the salmon fisheries there.⁴⁰⁵ Concerning the town's international trade, there is a record of a ship carrying cod and ling valued at 52s. from Youghal to Poole in 1504.⁴⁰⁶ While this is only one voyage, it is indicative of a wider unrecorded trade. Another entry from the state papers in 1548 mentions the town's fishing fleet being attacked by a pirate on its journey home.⁴⁰⁷ This entry does not tell us the size of Youghal's fleet, but it does confirm its existence and indicates the precarious position of many fishers on the water. The danger faced by fishers would only increase over the course of the sixteenth century, as new conflicts drew more pirates to the Irish coast.

Further along the coast from Youghal is the port of Dungarvan. The town was nominally a royal outpost but was contested between the Earl of Desmond and Lords of the Decies in the early sixteenth century.⁴⁰⁸ During the Kildare rebellion, Dungarvan castle was seized, and during its recapture, the English forces were 'supported at sea by fishermen of Devonshire and Cornwall'.⁴⁰⁹ That intervention suggests that fishers from those parts of England were already familiar with the town and had visited the area in previous years.⁴¹⁰

At the north-eastern edge of Munster, Waterford was probably the most important exporter of fish in sixteenth-century Ireland. The town is located where three rivers - the Barrow, Nore and Suir - reach the sea, meaning it has river access to a multitude of inland towns. Through the Barrow, Waterford was connected to New Ross; on the river Nore, it was connected to Kilkenny and Thomastown; and on the Suir, it had access to Carrick-on-Suir and Clonmel.⁴¹¹ The town also had an excellent harbour that could hold ships of up to 400 tons.⁴¹² Waterford was surrounded by the semi-Gaelicised Power family, with whom they were often in conflict. Further inland lay the lands of the Butlers, Earls of Ormond, one of the most powerful families in early modern Ireland and whose principal seat of power lay in Kilkenny.⁴¹³

⁴⁰⁴ Moody, Martin, and Byrne, *A New History of Ireland*, p. 10.

⁴⁰⁵ Went, "Fisheries of the Munster Blackwater"; "Fisheries of the Munster Blackwater (Continued)", *The Journal of the Royal Society of Antiquaries of Ireland* 91 (1961).

⁴⁰⁶ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 37.

⁴⁰⁷ Lennon and Irish Manuscripts Commission, *Calendar of state papers, Ireland, Tudor period 1547-1553*, no. 27, pp. 9-10, QFD ID 1547. See Chapter 5, Section 5.3 for more.

⁴⁰⁸ Moody, Martin, and Byrne, *A New History of Ireland*, p. 9.

⁴⁰⁹ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 143, p. 70, QFD ID 748.

⁴¹⁰ See more on this in the following chapter.

⁴¹¹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 8.

⁴¹² Ada Kathleen Longfield, *Anglo-Irish Trade in the Sixteenth Century* (London: George Routledge & Sons Ltd, 1929), p. 33.

⁴¹³ Moody, Martin, and Byrne, *A New History of Ireland*, p. 8.

Waterford was founded by the Vikings and was an important trading port after the Norman conquest. The town features prominently in the Chancery records from the thirteenth century onwards. Licences granted to the merchants of Waterford in the late fourteenth gave them the right to export herring to England.⁴¹⁴ Another licence granted in the year 1400 gave the right to all the citizens of Waterford 'to transport meat, fish, salmon and other victuals to England and Wales'.⁴¹⁵ The importance of the sea and fish to the town can even be seen in an illustrated panel from the town's Charter Roll drawn in 1372 (See Figure 2.3 on the following page).⁴¹⁶

While this image was composed centuries before the sixteenth century, the relationship between the town and its surroundings depicted here remained true in 1500. Natural resources, such as fish and wild animals, feature prominently in this image and were among the most important commodities exported from the town in the sixteenth century.⁴¹⁷ In fact, as Chapter 4 will examine, English port books show that the town was the largest exporter of fish to England in the early sixteenth century.⁴¹⁸ The fifteenth and early sixteenth centuries held apparent prosperity and stability in Waterford and much of the south-east. This prosperity was in part due to the many privileges Irish towns received from the English Crown, meaning there were few barriers to trade for the towns' merchants. Additionally, by 1463, almost all the independent towns were free to trade with the Gaelic Irish.⁴¹⁹ This freedom of trade opened opportunities that benefitted both parties.

⁴¹⁴ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Richard II, Patent Roll 10, no. 234, RCH 136/203, QFD ID 547.

⁴¹⁵ *Ibid.*, Henry IV, Patent Roll 1, no. 85, RCH 157/80, QFD ID 563.

⁴¹⁶ Eamonn McEneaney, "The Art of Diplomacy: Waterford's 14th-Century Charter Roll", *Irish Arts Review* 21 (2002).

⁴¹⁷ Longfield, *Anglo-Irish Trade in the Sixteenth Century*; Jones and Flavin, *Bristol's trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts*.

⁴¹⁸ *Bristol's Trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts*.

⁴¹⁹ Flavin, *Consumption and Culture in Sixteenth-Century Ireland: Saffron, Stockings and Silk*, p. 23.



Figure 2.3 - Reconstructed panel from The Charter Roll of Waterford, 1372.⁴²⁰

The small town of Ballyhack just outside Waterford also seems to have been a centre for fishing. The name Ballyhack itself may be derived from the hake fishery that took place there.⁴²¹ The small town also appears often as a homeport in the Welsh Port Books from 1550-1603, suggesting it was home to many mariners.⁴²² A survey of the area in 1541 showed there were nine fishers, who owned two boats, living in the area. In addition, any foreign fishers landing at 'le key' had to pay one cod, hake or one penny depending on what kind of fish they were targeting. This entry shows that local fishers engaged in their own activities, but also exploited visitors for taxation.⁴²³

Wexford was also an extremely important fishing port in the early sixteenth century. The town was independent but surrounded by lands owned by the English Earl of Shrewsbury.⁴²⁴ Like Waterford, Wexford has strong trading connections to England, and fish was the most valuable

⁴²⁰ "Recreating the Earliest Image of an Irish City: The Waterford Charter Roll." (Rubicon Heritage, 2012) <http://www.rubiconheritage.com/2012/02/15/recreating-the-earliest-image-of-an-irish-city-the-waterford-charter-roll/#lightbox/3/>.

⁴²¹ A. E. J. Went, "The Irish Hake Fishery, 1504-1824", *Journal of the Cork Historical and Archaeological Society* 51 (1946), pp. 42-43.

⁴²² Lewis, *The Welsh Port Books (1550-1603)*.

⁴²³ Went, "The Irish Hake Fishery, 1504-1824", p. 42, quoting from; White, *Extents of Irish Monastic Possessions, 1540-1541, from Manuscripts in the Public Record Office, London*.

⁴²⁴ Moody, Martin, and Byrne, *A New History of Ireland*, p. 7.

commodity exported from the town in the late fifteenth and early sixteenth centuries.⁴²⁵ The most prominent coastal towns that lay between Wexford and Dublin in the sixteenth century were Arklow, Wicklow and Bray. Unfortunately, we have no evidence for significant fishing or maritime trade happening in these towns in the early modern period. This may have been in part due to geography as the coastline north of Wexford is dotted with tricky sandbars that make navigation very difficult; this has been described as ‘a softer version of the Great Barrier Reef’.⁴²⁶

2.4 Conclusion

This tour of the coast has illustrated the great diversity of fisheries that existed around the coast of Ireland in the early sixteenth century. There were local fishing operations in every province in Ireland, some of which were commercialised and others purely subsistence. Additionally, fishers from across Ireland and Europe travelled long distances to exploit rich waters on the Irish coast. As the next chapter will explore, certain Irish lords and families became specialised in facilitating and taxing these foreign fishers. Fish was an important domestic product too, with strict laws limiting the unlicensed sale of fish in Dublin and the other English parts of Ireland. Visiting English fishers also made great use of Ireland’s marine resources, travelling to Gaelic Irish regions to fish and exploiting the seasonal herring and salmon fisheries in Carlingford and the River Bann.

To recap on this survey, Table 2.2, Table 2.3 and Table 2.4 provide short summaries of how fisheries operated on different sections of the Irish coast around the year 1500. While the great diversity of fisheries across the island makes generalisation difficult, an exercise like this allows us to compare regions and better understand the broader trends present in historical records. Each column summarises a different region of the coast; these regions were chosen to cover roughly equal areas and try to respect political and cultural borders. Nevertheless, within each region, a diverse range of different groups and fisheries can still be found.

The separate rows summarise different aspects of the fisheries. For example, the first region covered in Table 2.2 is the *Central East Coast* from Wexford to Dundalk. The first row titled *Control*, which summarises the dominant political groups on that coastal section. The second

⁴²⁵ Again, see Chapter 4 for the full analysis of the data.

⁴²⁶ R H Buchanan, "The Irish Sea: The Geographical Framework", in *The Irish Sea: Aspects of Maritime History*, ed. Michael McCaughan and John C. Appleby (Belfast: Queens University Belfast, 1989), pp. 4-5.

row, *Local Market*, refers to the way fish was bought and sold in each region. *External Connections* refers to the trade and fishing connections outside Ireland that were strongest in each area. *Origins of Fishers* summarises the most common origin of fishers who utilised each region of the coast. *Species* refers to the most prominent species of fish targeted in each region. The *Politics* heading provides a short summary of the political situation in each region and how peaceful the area was around 1500. Finally, *Physical Geography* relates to the landscape and the fishing and landing accessibility of each region. Table 2.2 below covers the coastline running from Wicklow to Dundalk, then Dundalk to Fair Head and Fair Head to Sheephaven on the far north coast.

Region	Central East Coast (Wexford to Dundalk)	North West Coast (Dundalk to Fair Head)	North Coast (Fair Head to Sheephaven)
Control	English and Old English.	Gaelic Irish, Old English, Scottish, and English outposts.	Majority Gaelic Irish, Scottish influence, English, and Old English visitors to the Bann.
Local Market	Commoditization and local consumption high in the market towns.	Markets in larger towns, supplies sent to English outposts, local operations mostly subsistence based.	Little evidence for large markets, export trade from Bann.
External Connections	Trade links to England, Wales, and continental Europe.	Carlingford operated large export trade, links to Earl of Kildare, Scotland, and England.	Visiting fishers to the River Bann and Scottish migration.
Origin of Fishers	Substantial local fishing fleets.	Local, visiting Irish fishers, and visiting English fleet (reported as 600 boats in 1534), likely Scottish too.	Local Gaelic Irish, English, Old English and Scottish.
Species	Herring, white fish, salmon.	Herring, white fish.	Salmon, herring, eel.
Politics	Mostly peaceful with some raiding by Gaelic Irish on borders of the Pale.	Competition for resources and land between rival groups caused sporadic violence.	Conflict among local clans and conflict over Bann fishery.
Physical Geography	Large sandbars cover the southern section. Several good ports north of Wicklow.	Several sheltered inlets in the south, but north of Larne landing places are limited.	Parts of the coast are inaccessible, but also has several sheltered inlets and river mouths.

Table 2.2 – Summary of fisheries across Ireland around 1500, part 1.

Table 2.2 highlights the dominant position of the English and Old English in the central east coast region. That dominance, as well as the relative peace and stability it brought, allowed large towns like Dublin and Drogheda to develop strong fishing industries in the medieval period and into the early sixteenth century. These towns consumed catches locally and had stable and trading links to the west coast of Great Britain, especially Chester, which provided a ready export market and source of salt for processing. As mentioned above, and depicted on Map 1.2, the southern part of this coastline had large sandbars off the coast. Dublin Bay is the largest natural inlet on this part of the coast, but sandbars made navigation to the inner bay difficult.⁴²⁷ Most sea traffic in this region sheltered in the multitude of smaller ports that dot the coast from Bray to Dundalk.

The north-east coast was different in many respects. It was mostly dominated by Gaelic Irish and Scottish clans, with isolated but powerful English outposts at strategic points. English outposts, like Carlingford, provided a safe space for large scale seasonal fleets to arrive from the south coast of England. Outside these operations, we know from the archaeological evidence that local and subsistence fisheries thrived in coastal areas. The geography of this region is mixed, Carlingford and Strangford are excellent sheltered inlets and there are many more small havens that provide good places for fishers to operate in. Belfast and Lough Larne provide natural shelter too, but the stretch of coast from Larne to Fair Head has limited landing places.⁴²⁸ For this reason, most of the fisheries on this stretch of coast operated between Dundalk and Larne.

Along the north coast of Ulster Gaelic families again dominated, with external influence being felt around the strategic Bann salmon fisheries. That river was a high prize and provided a good port for ships but was often the scene of contestation between the rival groups who sought to exploit it. Parts of the coast in this region are inaccessible due to coastal cliffs, but Lough Foyle, Lough Swilly, Sheephaven and other smaller natural inlets provide good shelter for ships and fishing. Table 2.3 covers the area from Sheephaven to Sligo, and then Sligo to Galway, and finally Galway to Dingle on the west coast.

⁴²⁷ Ibid., p. 5.

⁴²⁸ Ibid., p. 4.

Region:	North West (Sheephaven to Sligo)	Central West (Sligo to Galway)	Lower West (Galway to Dingle)
Control	Gaelic Irish, Scottish.	Gaelic Irish and Old English.	Old English and Gaelic Irish.
Local Market	Evidence for markets focused on tower houses.	Markets in larger towns and tower houses in Gaelic areas.	Markets in larger Old English towns.
External Connections	Evidence for foreign visiting fishers from England, Spain, and France.	Strong trade connections to continental Europe and England.	Trade connections to continental Europe are strong, connections to England too.
Origin of Fishers	Local fisheries based around rivers and inshore boats; larger vessels visited the region to fish.	Local fishing operations and visitors from Spain, France, and England.	Local and foreign Spanish and French.
Species	Herring, salmon.	Herring, salmon, sardines, hake, ling, cod, eel.	Salmon, herring, hake.
Politics	Strong regional power with the O'Donnells, but some conflict between neighbouring clans.	Sporadic conflict between Old English and Gaelic Irish groups. Some piracy.	Conflict between Gaelic Irish clans, conflict too between Old English Desmond family and rivals.
Physical Geography	Craggy coast with limited, but important, landing places and harbours.	Coast has many cliffs and is dotted with small islands, with some sheltered inlets and beaches.	Marine traffic focused on Galway Bay and the Shannon Estuary.

Table 2.3 – Summary of fisheries across Ireland around 1500, part 2.

Table 2.3 shows that the north-west was dominated by the Gaelic Irish in 1500, mostly by one family, the O'Donnell clan. The O'Donnells were an outward-looking family who partook in their own fisheries and taxed visiting fishers for the privilege of using their coast. The coastline south of Sligo is dotted with islands and has large stretches of coastal cliffs. Good harbours are few, but trade could take place in small inlets and on beaches where boats could be dragged ashore. Many of the coastal fortifications built by families such as the O'Donnells and O'Malleys in this region were well positioned to control these landing places.⁴²⁹ Further south, the Old English towns of Galway and Limerick dominated the most sheltered coastal features and exerted

⁴²⁹ Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 169.

strong influence over trade and fisheries. Overall, a diverse range of fisheries operated along the west coast, targeting a variety of fish species, although a lack of good records makes quantifying the scale of the fisheries here difficult. Finally, Table 2.4 below covers the south coast from Dingle to Cork and Cork to Wexford on the south-east of Ireland.

Region:	South Coast (Dingle to Cork City)	South East (Cork City to Wexford)
Control	Gaelic Irish and Old English.	Old English.
Local Market	Markets in larger Gaelic Irish and Old English settlements.	Strong local markets in larger towns.
External Connections	Trade and visiting fisher connections to France, Spain, and England.	Strong trade links to England (especially Bristol) and continental Europe.
Origin of Fishers	Large Spanish and French fleets, Old English fishers visited Gaelic area to fish as well.	Large local fleets fished locally and travelled within Ireland to fish.
Species	Herring, hake, pilchard, halibut, cod.	Herring, salmon, cod.
Politics	Conflict between Gaelic Irish clans. Conflict too between Gaelic Irish and neighbouring Old English towns.	Some conflict between independent Old English towns, Old English lords and Gaelic Irish.
Physical Geography	Rugged coast with several narrow bays and offshore islands, punctuated with small landing places.	Coastline interspersed with river mouths and provided inland connections and good shelter.

Table 2.4 – Summary of fisheries across Ireland around 1500, part 3.

The south coast from Dingle to Cork was mostly in the hands of Gaelic Irish chiefs in 1500, with the MacCarthys being the dominant family. The O'Sullivans at Berehaven and O'Driscolls at Baltimore both operated sophisticated fishing operations and controlled some of the best natural harbours. These Gaelic fisheries attracted ships from overseas and internally within Ireland and operated from many of the smaller landing places dotting the coast. Fish was a major economic asset which was traded heavily for continental goods like wine in these places. Old English towns, such as Kinsale and Cork, Waterford and Wexford controlled mouths of important rivers that gave them inland connections and good harbours. These towns operated their own fisheries and traded with their Gaelic Irish neighbours and overseas merchants. A few powerful Old English families dominated the South East region, but many towns, such as Youghal retained a high level of independence. The fisheries based in the Old English towns

were some of the most extensive in early modern Ireland. These municipalities had vibrant merchant communities and traded extensively with English ports like Bristol and continental cities.

This outline has only given a taste of the diversity of marine activity around the coast in the early sixteenth century, but it has also highlighted commonalities. A few species dominated the sixteenth-century fisheries, with herring as the most prominent, followed by several white fish species like hake and cod. Salmon was by far the most important river fish, but eel was also commonly caught. Many Gaelic Irish and Old English lords attracted foreign fishers to their territory; this practice generated income and facilitated the exchange of Irish-caught fish for luxury goods such as wine. However, the presence of these foreign fishers also provoked the ire of the English authorities, and their visitation would become an increasing source of conflict over the century.

It is important to note that the fifteenth and early sixteenth centuries were periods of relative peace in Ireland, which contributed significantly to the success of the fisheries and economy in general at the time. While conflict within the fisheries did occur, there was an underlying element of cooperation and trust between the different parties involved. This would begin to change over the course of the sixteenth century, with many regions of the country experiencing conflict as time progressed. These conflicts severely damaged many fishing operations. Tim O'Neill has written that the prosperity of the Irish merchant towns was intricately linked to their connections with the Gaelic Irish and Old English.⁴³⁰ As the level of conflict between these groups intensified trade and fisheries suffered.

Ultimately, this chapter has shown that fisheries developed differently on the Irish coast owing to the unique political, cultural, and geographic conditions that existed in various regions. The environment and its human inhabitants shaped fisheries, as did the internal and international relationships people maintained. This chapter also demonstrates the importance of not generalising about the fisheries of early modern Ireland. The local conditions and circumstances shaped the character of each fishery region and are vital to understanding the history of this sector.

Finally, the outline established here will allow us to study change across the century by analysing the qualitative and quantitative data in detail. Establishing a baseline of who had access to fisheries in 1500 is also important because, in no small degree, the type of change that each region would experience was dependent on its underlying political makeup. Old

⁴³⁰ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 130.

English fisheries experienced a different trajectory of change compared to the Gaelic Irish. As the remainder of this thesis will illustrate, a number of forces moved to radically shift fisheries in Ireland over the sixteenth century, and very little of what existed in 1500 would remain unchanged by 1603.

Chapter 3 – The Nature of Fisheries, 1500 to 1603

Gathered about his soft locks are the heroes of the Tuatha, the warriors of Fanad, the kingly youth of Inishowen, delightful hosts from whom the sea is easy to fish.

Tadhg Dall Ó Huiginn, *The Battle of Drumleene*.⁴³¹

3.1 Introduction

The previous chapter sketched out the diversity of fisheries around the Irish coast around the year 1500. This chapter aims to establish the nature of Ireland's fisheries across the whole sixteenth century. The nature of fisheries encompasses many of the fundamental questions about where fisheries operated, where fishers came from, how large fisheries were, what species were caught and what methods were used to do the catching. Other studies have not addressed these basic facts about Ireland's fisheries, and they are necessary to answer before we can discuss the factors that influenced the development of the industry in later chapters.

The first section of this chapter will present the QDA analysis results, the methods for which were outlined in Chapter 1. The data presented here will indicate the most popular fishing locations in sixteenth-century Ireland; it will examine from where fishers originated and the most commonly caught species of fish. The second part of this chapter will look at the nature and extent of distant water fishing operations in Ireland. Distant water fishing operations were integral to the maritime economy of sixteenth-century Ireland, and this chapter has compiled and analysed relevant studies from different parts of Europe that inform us about the operations of English, Spanish and French fishing fleets in Ireland. It also considers the wealth of Irish evidence that can increase our understanding of how coastal communities interacted and profited from visiting fishing fleets. The final part of this chapter will examine how fishers organised themselves in Ireland and their methods and technologies.

⁴³¹ Tadhg Dall Ó Huiginn, ed. *The Battle of Drumleene, from The Bardic Poems of Tadhg Dall Ó Huiginn (1550–1591)* (Cork: University College Cork, 2008), <https://celt.ucc.ie/published/T402563/index.html>.

3.2 Outline of Fisheries from Qualitative Data

This first section will focus on outlining the nature and trends within Ireland's fisheries using qualitative data collected in the QFD. Most of this information comes from the Irish State Papers and Admiralty Court Calendars. The full dataset behind this chapter can be found in Appendix 1 of the online data appendices.

3.2.1 Fishing Locations

One of the most fundamental questions we can answer about fisheries around Ireland during the sixteenth century is where they took place. To this end, Map 3.1 on the following page shows the site of every fishing location mentioned in the sources from 1496 to 1603. Written accounts that explicitly discussed the location of fishing sites or fishing towns and centres were analysed to generate this map. Therefore, these sites do not all represent the exact location where fish was caught but do indicate the locations around which fisheries were based and where the majority of fish was landed. For example, we have records that discuss Killybegs hosting a fishery, but it is likely that fishers made catches along the coast in the general vicinity of the town. In this instance, not all catches were made at Killybegs, but it was the central landing point of the fishery.

The map includes all types of fishing sites found in the sources; the main categories are river fisheries, lake fisheries and sea fisheries. As the map illustrates, the majority of sites were sea fisheries. Table 3.1 below the map lists the ten most frequently mentioned sea fishing sites. The spatial pattern of these locations fit into the general regions established in the previous chapter. There is a concentration of smaller fishing sites on the east coast between Dublin and Carlingford. On the Ulster coast, the English outpost of Carrickfergus stands out, as does the diverse fishery on the Bann. The remainder of the Ulster coast from Lough Foyle to Ballyshannon was in the Gaelic Irish's hands, with the O'Donnell clan being the most dominant family in that area. The islands Inishboffin and Aran were the most prominent fishing locations on the west coast; however, there was a lack of documentary evidence covering this region overall. The sources also frequently mention Galway in the context of its salmon fishery; the same was true of Limerick city. The south coast was host to several Gaelic Irish controlled fisheries, with Berehaven and Baltimore being the most prominent by far. Then the south-east coast was peppered with Old English controlled fishing towns, with Waterford as the most prominent of these towns and the most mentioned sea fishing site overall.



Map 3.1 – Count of Fishing Locations 1496-1603.⁴³²

⁴³² The data runs from 1496 onwards in order to include a few more relevant entries from the fifteenth century.

Fishing Location	Number of Mentions
Waterford	14
Berehaven	13
Baltimore	12
Lough Foyle	9
Carlingford	8
Killybegs	5
Youghal	4
Kinsale	3
Cork	3
Lough Swilly	2

Table 3.1 – Ten most mentioned fishing locations.

3.2.2 Freshwater Fishing Locations

Overall, there were far fewer freshwater fishing sites collected in this data, but some noteworthy patterns emerge despite this. The River Bann was the most frequently mentioned fishing site of any type, with 24 references in total. As discussed in the previous chapter, the Bann held a major salmon fishery in the medieval and early modern period that made it a valuable economic asset. However, the number of records generated relating to the Bann was also driven by the constant conflict over it. The English Crown, Gaelic Irish clans, Old English lords and travelling English fishers all sought to control the river at various times. The legal and physical disputes over the river generated many records in the Irish State Papers in particular. The Bann highlights that the data collected here do not necessarily show how proportionally important each fishing location was, but rather how often it was discussed in the source.

Lake fishing, too, while not commonly discussed, shows up intermittently in the sources. As can be seen on the map, Lough Neagh in Ulster was the most frequently mentioned lake fishery. In total, the fishery in Lough Neagh was discussed five times in the sources, far less than the Bann and many sea fishing sites. The cluster of freshwater fishing sites around Limerick and northern County Kerry come from the Peyton and Desmond surveys that were included in the QFD. The English conducted these land surveys in the aftermath of the Desmond Rebellions in the late sixteenth century.⁴³³ Those surveys provide an excellent snapshot of northern Munster's fishing economy that will be explored further in Chapter 5.

⁴³³ Murphy, *The Desmond Survey, II The Peyton and Desmond Surveys; The Desmond Survey, Clancarthy Survey* (Cork: CELT: Corpus of Electronic Texts, 2013), <https://celt.ucc.ie/published/E580000-001/index.html>.

3.2.3 Origin of Fishers

Where fishers originated from also had a significant bearing on the type of fishing that took place in different areas. As outlined in the previous chapter, Irish waters played host to a variety of different fishing fleets. The most apparent distinction between fishers were those who operated close to where they lived and landed their fish in home markets and those who travelled long distances to fish and brought a portion of their catches away to foreign markets. In the QFD, there is a 'Fishing Party' category; this was used to sort fishers and the ownership of fishing sites by their cultural identity. For instance, if Spanish fishers were reported fishing in Baltimore, then the Fishing Party would be recorded as Spanish. However, if the exact origin of fishers was not clear, then the 'Fishing Party' would relate to the group who controlled that fishing site; in that case of Baltimore, that would be the Gaelic Irish. Table 3.2 below shows the overall count of origin and ownership.

Fishing Party	Number of Mentions
Gaelic Irish	39
Old English	32
English	32
Spanish	17
Foreign General	3
French	2
Scottish	1

Table 3.2 – Origin of Fishers, 1496-1603.⁴³⁴

With this data, we can also see the spatial distribution of fishers across Ireland, which Map 3.2 shows. The map was limited to sea fisheries because these were far more likely to have external fishers present, as Irish or Old English landowners controlled most inland fisheries. The map is split into four panels: the first shows Gaelic Irish fishing locations; the second Old English; the third English; and the fourth Spanish, French and Scottish.

⁴³⁴ Three entries only discussed foreign fishers in general, without reference to their exact origin.



Map 3.2 – Origin of fishers around Ireland, 1496-1603.

The Gaelic Irish were the most frequently mentioned group overall, and their fishing sites were highly concentrated in a few key areas, such as Baltimore, Berehaven and Lough Foyle. As mentioned, the Irish mode of fishing involved both local domestic fishers, and the hosting of foreign visitors. Overall, the largest group of visiting fishers to Ireland were the English, who operated in both Irish controlled fishing locations such as Berehaven and had full control of seasonal fishing locations at places like Carlingford. The Old English fishers generally operated from the Norman towns found on the east and south-east coast, but they also engaged in distant water fishing within Ireland, travelling to Gaelic Irish and English-controlled areas like Donegal and Carlingford. The Spanish were the largest group of continental fishers on the Irish coast; they frequented similar locations to English fishers but had little presence in Ulster and instead focused their efforts on the south Munster coast. There were several reasons for this, not least the geographical proximity of the Munster coast to Spain.⁴³⁵ While fewer in number, the French also focused their fishing efforts on the south coast. Lastly, a single reference to Scottish fishers at Islandmagee was found in the sources. There may well have been a more substantial connection between Ulster and Scotland, but the extant sources have inadequate coverage for this area.

The Bann was left out of this map because it was a river fishery and this map only shows sea fishing locations. However, if we examine the Bann in isolation, we see that in total, there were 15 mentions of English distant water operations on the river and one mention of Old English fishers travelling to fish there. There were a further nine mentions of the Gaelic Irish fishing the river; these would have been locals from the Irish families who owned land along the riverbanks.

The maps also reveal the presence of a great variety of fishers at certain locations. All the groups mentioned, apart from the Irish, engaged in distant water fisheries. The role of the Irish was often to host and tax these travelling fishers. As the sixteenth century progressed, the prevalence and the English tolerance for these culturally mixed fisheries would decline. This changing pattern over time can be observed in Figure 3.1, which shows what year fishers from different countries were mentioned.

⁴³⁵ A report from 1589 suggested that Spain was only 'four days sail' from the Munster coast, Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-1603*. Vol. 4: Aug 1588-Sept 1592 (London: Longman & Co, Truebner & Co, Parker & Co, Macmillan and Co, A&C Black, A. Thom., 1885), no. 34, p. 252, QFD ID 1113.

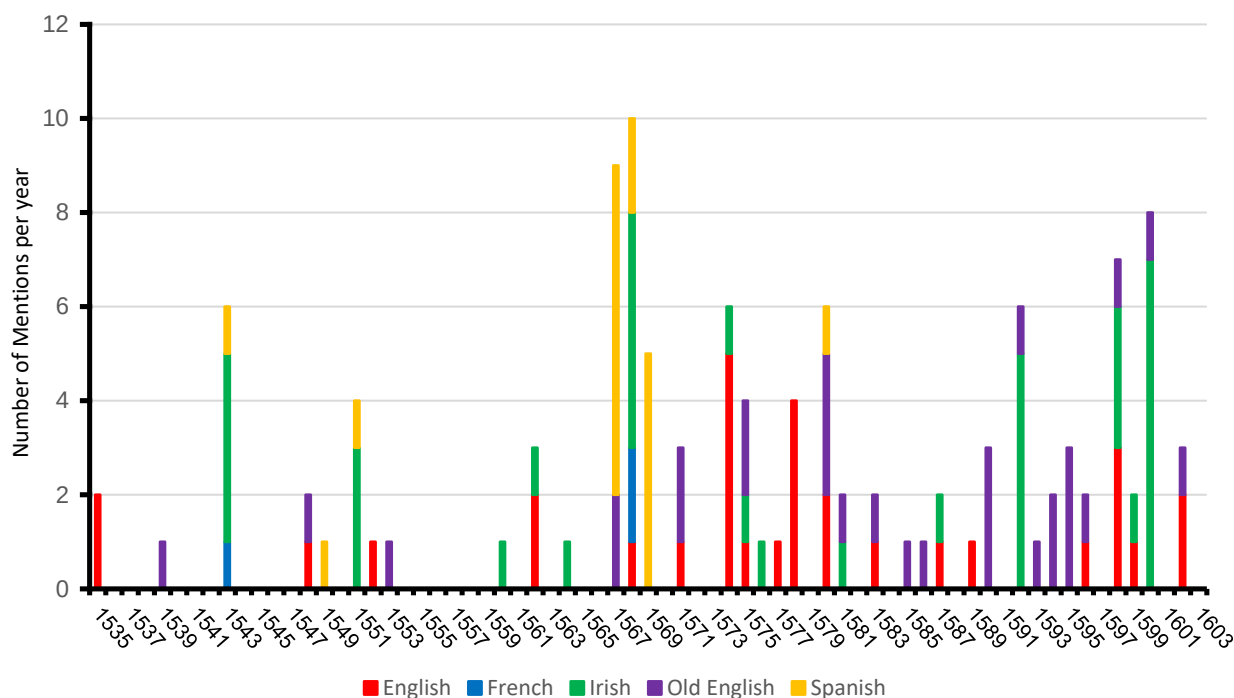


Figure 3.1 – Nationality of fishers per year, 1535-1603.⁴³⁶

The data shows that, from the middle of the sixteenth-century, records become more numerous overall, with reports of Spanish fishers peaking in the 1560s and the last instance of Spanish fishing reported in 1580. In the later decades, only Irish, Old English and English fishers were reported. The significant spike in the number of Irish fishers toward the end of the century was primarily driven by English expansion into Irish territory. The English desire to control and incorporate these fisheries into plantation schemes led them to be recorded with higher frequency.

That is a particular trait of these sources; when fisheries were operating normally, they usually went unnoticed and unrecorded. When things went wrong, when fisheries were involved in a conflict or attracted the attention of the authorities or lawmakers, they get mentioned in the sources. That does not invalidate this study, but it does invite us to be aware of the context around the sources used and be mindful that much more went unsaid about the day-to-day operation of fisheries. Chapter 4 helps fill some of the gaps left by the qualitative analysis by exploring trade records, while Chapter 5 explores the relationship between fisheries and conflict.

⁴³⁶ The first mention of fishing where the nationality of the fisher could be determined only occurred in 1535. For simplicity, the Scottish example was left off this graph. The Scottish example was referenced in 1568, Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 149, p. 67, QFD ID 1574.

3.2.4 Target Species

The species of fish available at each location also determined the type of fishing that took place there. Table 3.3 below shows the number of times different species were mentioned at fishing locations around Ireland. This list includes fresh and saltwater fish. The species targeted were not reported for every site, but overall, herring was the most common sea fish by far, with hake next with only two mentions. Salmon was the most common freshwater fish, followed by eels.⁴³⁷

Species	Number of Mentions
Herring	25
Salmon	22
Eel	3
Hake	2
Trout	2
Shad	1
Pilchards	1
Flounders	1
Oyster	1
Cod	1
Mussels	1

Table 3.3 – Mentions of species around Ireland, 1496-1603.

The spatial distribution of the two most dominant species, herring and salmon, can be seen in Map 3.3 on the next page. Waterford, Carlingford and Killybegs emerged as the places most frequently associated with herring fishing. For salmon fishing, the River Bann and Shannon Estuary were the most common sites. This data alone suggests that herring was the most exploited sea fish by far but also illustrates there was a diversity of other fish and molluscs discussed in the sources, albeit in much smaller numbers. As we shall see later, other fish, such as hake, were commercially important species in Ireland. So, it is unclear why they are mentioned to a much lesser extent compared to herring and salmon. It is possible that hake

⁴³⁷ Technically both are amphihaline species, meaning they live in both marine and freshwater. However, as they were primarily targeted and fished in freshwater that is what they are referred to as here, see "Salmo salar (Linnaeus, 1758) Atlantic salmon." (Fishbase.org, 2020) <https://www.fishbase.se/summary/salmo-salar.html> & "Anguilla anguilla (Linnaeus, 1758) European eel." (Fishbase.org, 2020) <https://www.fishbase.se/summary/Anguilla-anguilla.html>.

was targeted more by distant water fishers in Ireland and was not consumed locally as much as the other species.



Map 3.3 – Salmon and Herring Fishing Locations, 1496-1603.

3.3 Distant Water Fishing Voyages

The most prominent pattern that emerges in the data presented thus far is the prominence of distant water fishing enterprises in sixteenth-century Ireland. This section will discuss in turn the patterns and nature of English, Gaelic, Spanish, and French distant water operations on the Irish coast. The final section will further explore how these Irish voyages were a precursor to the later Newfoundland cod fishery.

3.3.1 Internal Fishing Voyages

Within the qualitative sources, four records were uncovered that explicitly listed the origin and destination of internal Irish fishing voyages. Table 3.4 below shows the routes of these four internal voyages. They all originated from Old English towns, with two visiting Donegal, another voyage to the Bann and one more to the herring fishery at Carlingford. What these voyages indicate is that Old English fishers had options when fishing within Ireland. We know towns like Dublin had domestic herring fisheries, but fishers and merchants from these places could fund and take part in voyages to both Gaelic Irish areas and regions controlled by the English.

Year	Origin	Destination
1571	Dublin & Drogheda	Killybegs
1588	Dublin	River Bann
1591	Galway	Carlingford
1596	Drogheda	Killybegs

Table 3.4 – Internal Fishing Voyages, 1500-1603.

Many of these voyages take place later in the sixteenth century. However, we know from a statute mentioned in Chapter 2 that fishers from Wexford, Waterford, Youghal, Cork and Kinsale were fishing at Baltimore from at least 1450.⁴³⁸ The statute specially banned fishers from travelling to the Gaelic Irish area to fish, likely to prevent the income this brought the Irish. So, Old English fishing in Gaelic water was not a phenomenon that began in the sixteenth century. Instead, it became more contentious in this period, and increasing levels of conflict in Ireland meant this activity was being recorded more. For example, in 1571, fishers from Dublin and Drogheda went on a fishing voyage to Killybegs and reported back the presence of Scottish

⁴³⁸ Berry, *Statute Rolls of the Parliament of Ireland in the Reign of King Henry VI*, 28 Henry VI. A.D. 1450, X, pp. 191-193.

ships in the area to the English authorities.⁴³⁹ There would be no record of the voyage if the fishers had not sent the report about the enemy forces. Likewise, the 1596 trip from Drogheda to Killybegs is entered into the State Papers because the Drogheda fisher reported the presence of an enemy Spanish vessel in O'Donnells' waters.⁴⁴⁰

A 1588 voyage to the Bann was recorded in the context of the English attack on Macosquin Abbey just outside modern Coleraine. In this case, Francis Stafford wrote that his forces killed the local Gaelic chief, Fordorough O'Cahan. He also reports that 'the merchants of Dublin, which have used to fish the Bann' attested to 'outrageous exactions' imposed by Fordorough 'when they came to fish the Bann'.⁴⁴¹ This entry makes it clear that the Dublin merchants had a long tradition of fishing at the Bann and the recent conflict there is the reason the practice was being reported at all. As will become evident later, the practice of Gaelic Irish chiefs charging taxes for the use of fishing grounds was common in sixteenth-century Ireland.

The 1591 voyage listed in Table 3.3 was recorded because a Galway merchant called Black was fishing at Carlingford when a Spanish captain, Don Alonso, asked him to deliver letters back to the Spanish king on his behalf. The delivery would have been an act of treachery on Black's part; however, at the time Galway was a mostly independent city. Sir Bingham, who reported on Black's actions, wrote that Galway was 'inhabited by a people that do generally favour the Spanish nation and their religion, their merchants having intercourse and daily traffic with the Spaniards'.⁴⁴² After leaving Carlingford, Black travelled to the northern coast of Donegal where he was captured by the MacSweeneys, who controlled the area. It is not clear why Black travelled there or why he was imprisoned; he may have gone there to fish, as Lough Swilly, another common fishing ground, was located beside the MacSweeney territory. This example again illustrates that Old English distant water fisheries had a more extended history, but the conflict of the later century disrupted old patterns of fishing and cooperation. The normalcy of these voyages in previous decades would not warrant their recording, but in the context of conflict, Old English fishers could act as spies for the English. As later chapters will further explore, fishers who wanted to maintain old patterns faced many obstacles as the sixteenth century progressed.

⁴³⁹ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 84.4, p. 53, QFD ID 721.

⁴⁴⁰ The English and Spanish were at war from 1585 to 1604.

⁴⁴¹ Hans Claude Hamilton, ed. *C.S.P. Ire. Vol. 3 1586-1588* (London: Public Records Office, 1877), no. 36, p. 505, QFD ID 1593.

⁴⁴² *C.S.P. Ire. Vol. 4 Aug 1588-Sept 1592* (London: Public Records Office, 1885), no. 52, p. 467, QFD ID 1130.

3.3.2 English Distant Water Fisheries

The data mined from qualitative sources showed that the English were the most significant group involved in distant water operations in Ireland. To analyse English operations further, Map 3.4 shows the reported routes of English fishers who travelled to Ireland for fishing. Once again, on this map, the 'Ireland Centroid' and 'England Centroid' represent entries where one leg of the journey only had a country and no specific place mentioned in it.



Map 3.4 – Routes of English Fishing Voyages to Ireland, 1500-1603.

This map shows that there was a concentration of fishers coming from the West Country of England to the south-east, south, and west coasts of Ireland. The West Country is generally defined as the counties of Cornwall, Devon, Dorset, and Somerset in southwest England. Maryanne Kowaleski's research has shown that fishers from this region increased their distant water fishing operations from the fifteenth century onwards. These fishers engaged in eastward fishing voyages to places like Rye within England and engaged in more remote operations in the Icelandic cod fisheries from the middle of the fifteenth century. However, in the fifteenth and early sixteenth centuries, the most significant fishing location for the West Country fishers was

Ireland.⁴⁴³ Later in the sixteenth and seventeenth centuries, these fishers would also travel in large numbers to Newfoundland and New England to fish.⁴⁴⁴

The surviving customs accounts from the English West Country provide compelling evidence for the extent of fishing operations in Ireland. Kowaleski has tabulated data from a variety of West Country ports from the years 1492/3 and 1497/8, providing a snapshot of the fish trade in the 1490s.⁴⁴⁵ The fish recorded in these customs accounts had to come from overseas, as fish caught locally was not registered, so we can be confident most of it originated in Ireland.⁴⁴⁶ However, the catches recorded by these accounts are only a fraction of the total catch brought into these ports. Kowaleski estimates that 80 per cent of all the catches were transported via coastal trade or caught locally and therefore not included in the accounts.⁴⁴⁷ Luckily for us, the percentage caught locally is not relevant to the study of Irish imports. By combining all Kowaleski's figures, we get a total value of £816 worth of fish imported in 1492/3 and 1497/8. Map 3.5 below shows the spatial distribution of these combined imports.



Map 3.5 – Relative Value of Fish Imports to South-Western English Ports, 1490s.⁴⁴⁸

⁴⁴³ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 442.

⁴⁴⁴ *Ibid.*, p. 442.

⁴⁴⁵ The data is presented in a somewhat confusing way, but due to the limitations of the sources records for each port were only available for either 1492/3 or 1497/8. The data was then combined to provide a single 'snapshot' of the trade during the 1490s.

⁴⁴⁶ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 442.

⁴⁴⁷ *Ibid.*, p. 432.

⁴⁴⁸ *Ibid.*, p. 437.

Map 3.5 shows that Minehead was the largest importer of fish. Given the geographic proximity to Ireland and the types of fish imported, it is likely that English vessels caught most of this imported fish off the Irish coast. Figure 3.2 below shows the three most valuable species imported to the ports of Devon and Cornwall in the 1490s. It indicates that hake was the most significant import, followed by herring, with pilchards a distant third. The evidence from Table 3.3 discussed earlier suggested that hake were not an important species in sixteenth-century Ireland. However, the data in Figure 3.2, and other evidence, shows that hake was an important commercial species, but may have been more targeted by visiting fishers than the native Irish.

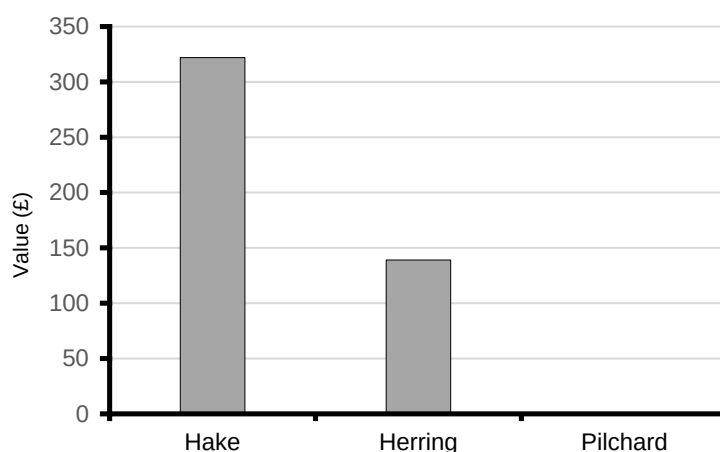


Figure 3.2 – Species of fish imported to the ports of Devon and Cornwall, 1490s.⁴⁴⁹

For comparison, Figure 3.3 below shows the export of fish from the same West Country ports. It shows a similar pattern, with hake being the largest import ahead of herring and pilchards, although the latter two are closer together in this instance.

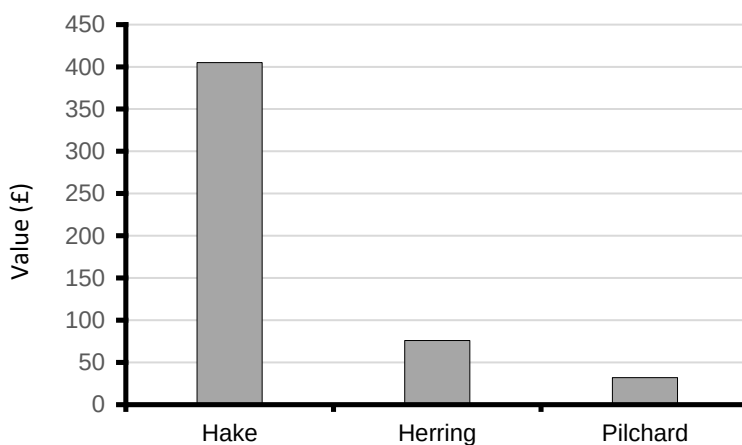


Figure 3.3 – Species of fish exported to the ports of Devon and Cornwall, 1490s.⁴⁵⁰

⁴⁴⁹ Ibid., p. 440.

⁴⁵⁰ Ibid., p. 440.

As mentioned in the previous chapter, hake is distributed widely along the Irish coast. Modern catches of hake are highly concentrated close to shore off the south-east and west coasts.⁴⁵¹ The reason for this concentration of catches is the presence of a large hake nursery ground off the Irish south coast in the Celtic Sea, and then there is another significant ground south of this in the Bay of Biscay.⁴⁵² Referring to Map 3.2, some of the most popular English fishing sites were along the south and south-east coast of Ireland, which was in part due to the abundance of migrating hake in this region.

Peak spawning is generally seen in the Bay of Biscay from January to March, with the Celtic Sea's strongest spawning from May to July.⁴⁵³ Many hake also spawn on the continual shelf and migrate towards nursery areas on the Irish coast over the season.⁴⁵⁴ However, there is also much inter-annual variability in hake's spawning intensity in the Bay of Biscay and Celtic Sea.⁴⁵⁵ In some years, spawning populations are far more substantial in one of these regions compared to the other. This variability may have influenced fisheries in the fifteenth and sixteenth centuries as well, but the data does not exist to say this for sure.

English evidence shows that hake fishing boats left south-west England in late May and early June and generally returned to their home ports after 12 weeks in late August and September.⁴⁵⁶ This timing largely coincides with the northward movement of the spawning hake. So, it seems likely fishers knew the hake would be more abundant on the Irish coast during the summer and early Autumn months. The fishery drew ships from all along the shores of Devon, Cornwall, and Somerset. It is difficult to estimate the total number of vessels that were going to Ireland, but we know that in 1497/8, 30 ships sailed from Plymouth to Ireland with salt as their only cargo.⁴⁵⁷ The fishers used the salt they carried to process their catch and bring it back to England. A portion of the fish was then re-exported to other ports. An Exchequer inquiry from the Devon ports in 1474-5 reveals that vessels from 11 different ports in Devon

⁴⁵¹ Gerritsen and Kelly, *Atlas of Commercial Fisheries around Ireland, Third Edition*, p. 51.

⁴⁵² "Species Dashboard, Hake (*Merluccius merluccius*)", <https://shiny.marine.ie/speciesdash/>.

⁴⁵³ Maria Korta et al., "European hake (*Merluccius merluccius*) in the Northeast Atlantic Ocean", in *Hakes: Biology and Exploitation*, ed. Hugo Arancibia (2015), p. 8; Paula Alvarez et al., "Distribution and abundance of European Hake *Merluccius merluccius* (L.), Eggs and Larvae in the North East Atlantic Waters in 1995 and 1998 in relation to Hydrographic Conditions", *Journal of Plankton Research* 26 (2004), p. 819; Hilario Murau, "Reproductive Fundamentals for the Estimation of Egg Production of the European Hake, *Merluccius merluccius* in the Bay of Biscay" (PhD diss., Universidad del País Vasco, 2006), p. 24.

⁴⁵⁴ Alvarez et al., "Distribution and Abundance of European hake *Merluccius merluccius* (L.), Eggs and Larvae in the North East Atlantic Waters in 1995 and 1998 in relation to Hydrographic Conditions", p. 812.

⁴⁵⁵ *Report of the Working Group on the Assessment of Southern Shelf Stocks of Hake, Monk and Megrim (WGHMM)*, (Copenhagen: ICES, 2013), p. 53.

⁴⁵⁶ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 443.

⁴⁵⁷ *Ibid.*, p. 443.

shipped Irish fish onwards to ports in Kent, Hampshire, Devon, Somerset, and Gloucestershire.⁴⁵⁸ The shipments of hake contain several different kinds of cures, which indicates the sophistication of the industry in the period.⁴⁵⁹

There is also some evidence for Welsh fleets utilizing Irish waters. A survey of ships in Pembroke taken in 1566 records 16 different ships as fishing vessels. The survey reports that most of them 'useth commonly to Ireland afishinge and upp Severne'.⁴⁶⁰ An Admiralty case from 1577 provides details on how English and Welsh fishing voyages were organized. The deposition records that, in June the previous year, the *John* of Plymouth left on a fishing voyage to the coast of Ireland. The owner, John Langford, funded the voyage and was to receive a sixth share of all the fish caught. The master was Matthew Hore, and he was responsible for supplying the ship and paying wages. He would be allowed to keep the rest of the fish, except for 'one young man of Langford's' who was also allowed to keep the fish he caught.⁴⁶¹ This voyage is an excellent example of how these distant water operations were funded and how they shared the catch and profit. Unfortunately for all involved, the ship sank when it returned to St Ives in Cornwall.

In total, the records show that 283 ships from south-west England engaged in overseas fishing during the 1490s.⁴⁶² There is no way to know how many of these vessels came to Ireland each year, but other records make it clear that Ireland was a significant destination for the south-west English fishers. Kowaleski credits the expansion of the English south-west fisheries to several factors, including the rise of the Dutch herring fishery in the North Sea. The success of the Dutch in the North Sea drove east coast English fishers out of the market and created an opportunity for their counterparts on the west coast.⁴⁶³ As mentioned earlier, the south-west of England was also geographically favourable to exploit the vibrant waters off the Irish coast, and they had a multitude of ports in England where they could sell their catch. Furthermore, the English fishers were well-positioned to exploit new markets and sources of salt in southern Europe.

It must also be stated that all aspects of maritime activity expanded in the late fourteenth century, not just the English fisheries in Ireland. As Kowaleski writes, 'naval ventures, privateering and piracy, coastal and overseas trade, the sea-carrying trade, and fishing' all

⁴⁵⁸ PRO, E159/253, Trinity recorda, mm. 25-27, quoted in, *ibid.*, p. 443.

⁴⁵⁹ *Ibid.*, p. 443.

⁴⁶⁰ Lewis, *The Welsh Port Books (1550-1603)*, pp. 311-313.

⁴⁶¹ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 214, p. 42, QFD ID 49.

⁴⁶² Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 432.

⁴⁶³ *Ibid.*, p. 450.

increased in this period so that we observe in Ireland was also part of a broader expansion of maritime activity.⁴⁶⁴

As the graphs above illustrated, herring was the second-largest catch of the English fishery in Ireland, and in some years, it may have been the largest. One of the most prominent English distant water fishing locations in the sixteenth century was Carlingford. As Map 3.2 showed above, it was the most mentioned English fishing site in the sixteenth century. As discussed in the previous chapter, William Brabazon reported a fleet of 600 English fishing boats were engaged in the herring fishery there in 1535. Brabazon wrote that Carlingford Castle and Green Castle on the other side of the bay were in ruins, but if the fishing continued, it would generate 'as much rent as ever was paid, and the residue of the profit will, within a short time, make both the castle of Carlingford and the Green Castle to be wardable'.⁴⁶⁵ Brabazon made his observation because the English fishers at Carlingford offered themselves as a mercenary force of 3,000 soldiers should they be needed. Because these figures had strategic military importance, we should expect they were accurate and provide clear evidence there was a substantial fishery operating at Carlingford in the early sixteenth century.

If divided evenly, these figures mean each fishing boat at Carlingford had a crew of five, which suggests they were small boats, probably pinnaces.⁴⁶⁶ Kowaleski has suggested most of the fishers at Carlingford came from Somerset and North Cornwall.⁴⁶⁷ A later extent of land taken in 1540 refers to Carlingford as 'a very safe harbour for ships that arrive in the months of September and October', and the fishing fleet 'rivals in size anything in England', it reported that ships came for 'an abundance of herring'.⁴⁶⁸ The report of fishing in autumn matches with the report of the modern spawning period of herring in the north Irish Sea, although marine scientists have observed that these spawning periods fluctuate year on year.⁴⁶⁹ In 1554, John Dympsy, a fisher from Dublin, had his deposition taken in front of the Admiralty Court. He told the court that he had been 'fishing in Carlingford haven for herrings' at Michaelmas the year before.⁴⁷⁰ This account illustrates that fishers from Dublin travelled to fish in Carlingford and the fishing took place within the confines of the lough. Dympsy's report is interesting because today

⁴⁶⁴ Ibid., p. 451.

⁴⁶⁵ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 70, p. 85, QFD ID 769.

⁴⁶⁶ See Section 3.4.2 for more on boat types.

⁴⁶⁷ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 442.

⁴⁶⁸ Gearóid Mac Niocaill, ed. *Crown Survey of Lands 1540-41 with the Kildare Rental Begun in 1518* (Dublin: Irish Manuscripts Commission, 1992), p. 75. This has been translated from the original Latin.

⁴⁶⁹ D. Brophy, Peiter-Jan Schön, and Pauline King, "Temporal Trends in Stock Origin and Abundance of Juvenile Herring (*Clupea harengus*) in the Irish Sea", *ICES Journal of Marine Science* (2008).

⁴⁷⁰ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 46, p. 9, QFD ID 638.

there are no spawning herring populations within Carlingford Lough itself.⁴⁷¹ Given this, the spawning location of the herring may have shifted over time.

The evidence suggests that the south-east coast was a frequent location for English fishers targeting herring and hake, and Map 3.2 showed a concentration of English fishing activity in this area. As mentioned in the previous chapter, in 1535 Lord Deputy Skeffington reported that fishers from Devon and Cornwall had assisted his forces in the siege of Dungarvan Castle in County Waterford.⁴⁷² The assault took place in September; this suggests the English fishers may have been at the tail-end of the hake fishing season, which ends in September. Alternatively, they could have been arriving for the herring fishing that takes place from September onwards.⁴⁷³ Although, the town was known for hake fishing, which suggests this was the catch the English were after.⁴⁷⁴ Once again, in this case, the presence of English fishers in Ireland had military consequences during the Kildare Rebellion. This account, combined with the one related to Carlingford, may indicate that English fleets were operating in both areas in 1535.

English fishing around Waterford town is reported particularly often in the later sixteenth century. This increased reporting was in part due to a rise of conflict in the period, which brought the fishery, and the danger it faced into greater focus.⁴⁷⁵ For example, in 1587, Sir John Perrot warned that if the Spanish had attacked Ireland during the winter that year, they would have captured '200 sails of bark' and 1,200 mariners from England that had come for the fishing.⁴⁷⁶ Perrot goes on to say that the capture and destruction of the fishing fleet would cause significant economic damage and that in previous years, the fishers were 'accustomed to come thither a fishing two or three thousand'.⁴⁷⁷ If that figure refers to the number of persons, then it matches the reported number from Carlingford earlier in the sixteenth century well. A letter from later in 1596 again warned that the English fishery at Waterford was in danger of attack and mentioned the fishery usually took place in November and December.⁴⁷⁸ This reported period also matches

⁴⁷¹ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds".

⁴⁷² Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 143, p. 70, QFD ID 747.

⁴⁷³ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 443; O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds", p. 27.

⁴⁷⁴ Went, "The Irish hake fishery, 1504-1824", p. 42; Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 101, p. 175, QFD ID 921.

⁴⁷⁵ Chapter Five will discuss these conflicts in greater detail.

⁴⁷⁶ Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588* (London: Longman & Co, Truebner & Co, Parker & Co, Macmillan and Co, A&C Black, A. Thom., 1877), no. 35, p. 443, QFD ID 1080.

⁴⁷⁷ *Ibid.*, no. 35, p. 443, QFD ID 1080.

⁴⁷⁸ Ernest George Atkinson, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 6: July 1596-Dec 1597* (London: Her Majesty's Stationery Office, 1893), no. 53, p. 153, QFD ID 1199.

with the modern observed spawning period of herring on this part of the coast, again suggesting the timing of the fisheries was based on the herring's spawning patterns.⁴⁷⁹

English fishers also engaged fisheries based on single larger ships operating independently. A case heard before a judge of the Admiralty in 1579 gives us insight into how these vessels worked. The series of depositions reported that, in the summer of 1577, two merchants, Peter Smyth and Gilbert Bodleighe, outfitted a ship called the *Emerye* in London for a fishing voyage to Ireland. The voyage was financed by the shipowner, who remained in London. The crew loaded onboard 'salt in barrels and other empty casks, hoops, nets and other necessities for fishing'.⁴⁸⁰ The *Emerye* then travelled to Cork, Kinsale and Waterford and made a catch of 16 lasts of herring, which the crew cured with 27 casks of salt. They then transported it to Le Havre in Normandy to sell. This entry demonstrates that single vessels operating alone came to the Irish coast equipped to catch and process their catch self-sufficiently. It is also notable that the ship caught the herring and carried it to another market outside Ireland and England to sell it.

Distant water operations for salmon were also popular with English fishers. As mentioned previously, the most prominent salmon fishing location frequented by the English was the River Bann. In 1519, the river was leased to Otwell Corbett, an English merchant. In 1524, the river was again let to Otwell and two other merchants from Chester. The river continued to be granted to different English subjects over the sixteenth century.⁴⁸¹ As the case from 1588 illustrated, the local Irish continued to exert influence over the river in the late sixteenth century. In 1542, the English captured the O'Cahan castle on the Bann, which they called 'an obstacle to the fishing there'.⁴⁸² Later in 1543, the O'Cahans signed an agreement with the lord deputy to settle the conflict, the first article of which was a promise to stop extracting 'ransoms, or tributes from farmers and other subjects of the King repairing to the Banne for the purpose of fishing'.⁴⁸³ These events illustrate that there was an active English fishery in the period and that establishing a peaceful river in which to fish was an important issue for the English authorities.

There is no way to know how many English vessels visited the Bann each year, but individual examples provide us with details about how the fishery worked. An Admiralty case from 1555 describes how a merchant in London, Thomas Kent, purchased a pinnace to send on a fishing

⁴⁷⁹ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds".

⁴⁸⁰ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 220, p. 43, QFD ID 1559.

⁴⁸¹ Quinn, "Anlgo-Irish in Ulster In the Early Sixteenth Century", p. 67.

⁴⁸² Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 611, p. 339, QFD ID 756.

⁴⁸³ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 3: 1586-July-1588, no. 177, p. 202, QFD ID 773.

voyage to the Bann with other ships owned by other London merchants. The profits of this venture were to be shared among the merchants when the ships returned to London.⁴⁸⁴

Bristol merchants were also heavily invested in the Bann fishery. In 1566, an English official, Valentine Browne, and a consortium of Bristol merchants were competing for the rights to the river. At the time, the Lord Deputy favoured Browne for the grant, but this case shows us that the Bristol merchants were interested in the fishery then too.⁴⁸⁵ In 1569, John Smith advised the Lord Treasurer of Ireland that the government in Dublin should start to collect tax from the Bristol merchants who traded 'in the north, for salmon and also hides, yam and tallow'.⁴⁸⁶

English fishers and merchants visited other rivers in Ulster to fish for salmon as well. As mentioned in the previous chapter, in 1539, Thomas Lynch, a Galway merchant, reported that a ship from Bristol was at Assaroe, near Ballyshannon, and would 'stay two months getting salmon'.⁴⁸⁷ This entry illustrates that these salmon voyages were similar to those for hake and herring. Fishers would travel long distances and remain in the fishing grounds for an extended period to achieve their catch. In 1539, Assaroe was controlled by the O'Donnell's, which shows that in this period, English fishers and merchants could still operate in Gaelic Irish territory without consequence. However, Lynch wrote his letter in anticipation of an Irish attack on the English Pale, a harbinger of the conflict that would engulf Ulster later in the century.⁴⁸⁸

These examples illustrate the complex systems of ownership and finance that was behind many of these voyages to Ireland. The majority of the larger fishing fleets originated from south-west England. However, we also have evidence for English ships travelling from Bristol, Chester, London and elsewhere to fish in Ireland. It is difficult to trace the exact scale of these operations, but it seems clear that they were at their most frequent during the late fifteenth and early sixteenth centuries. During the summer months, hake was the main target of these fishers, and they made their catches along the south-east, south, and west coasts, close to the extensive hake nursery grounds that cover the region. During winter, herring was the primary target; Carlingford and Waterford were the principal herring fishing grounds for English fishers in Ireland.

As the sixteenth century progressed, these English operations were increasingly disrupted by, and involved in, conflict. However, these conflicts also generated records that provide us with

⁴⁸⁴ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 61, p. 12, QFD ID 640.

⁴⁸⁵ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 292, p. 132, QFD ID 1555.

⁴⁸⁶ *C.S.P. Ire., Tudor Period 1568-1571*, no. 379, p. 154, QFD ID 673.

⁴⁸⁷ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 470.2, p. 236, QFD ID 752.

⁴⁸⁸ *Ibid.*, no. 470.2, p. 236, QFD ID 752.

vital details about the fishery. Our best estimate for the scale of the industry comes from 1535 when William Brabazon reported 3,000 were at Carlingford.⁴⁸⁹ In the same year, the Lord Deputy, William Skeffington, reported an English fishing fleet at Dungarvan.⁴⁹⁰ Skeffington does not mention the size of this fleet, but much later in 1587, Sir John Perot estimated that in previous years the number of English fishers at nearby Waterford numbered 2,000 to 3,000 individuals.⁴⁹¹ Taking the report of fleets at Carlingford and Dungarvan in 1535, and combining this with the reported figure from 1587, we can estimate an upper range of 6,000 English fishers in Ireland around 1535, and if all 6,000 fishers operated in crews of five that would mean 1,200 small English boats in Irish waters.⁴⁹² This figure is difficult to verify, but it is the best estimate we can establish with the available evidence.

3.3.3 Gaelic Irish Connection to Distant Water Fisheries

As Map 3.2 illustrated, French and Spanish fishers were frequent visitors to Irish waters, particularly Gaelic Irish regions, in the sixteenth century. As mentioned, the Gaelic Irish did not engage in their own extensive sea fisheries but instead had systems in place to cater for, protect, and tax, visiting fishers from other areas. Spanish and French voyages to Ireland were happening from at least the middle of the fifteenth century. It was also during this period that the English authorities began attempting to limit and tax these voyages. For example, in 1465 a statute ordered that 'every vessel of other lands coming to the said land of Ireland fishing' over 12 tons had to pay 13s. 4d., while every vessel under 12 tonnes paid 2s. per year to the King to be allowed to fish in Ireland. It also stated the money was to be used to fund the King's wars in Ireland.⁴⁹³ If any fishers left Ireland without paying, they would forfeit their vessel and goods. However, the statute declares that every ship on the north of Wicklow was exempt from the charge. This focus on the area south of Wicklow suggests the English authorities were most concerned with restricting the income visiting fishers provided the Gaelic Irish.

At Baltimore, the O'Driscolls maintained a complex system of taxes to charge visiting fishers on their coast.⁴⁹⁴ An inquisition from 1609 described how this system worked in previous

⁴⁸⁹ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 70, p. 85, QFD ID 769.

⁴⁹⁰ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 143, p. 70, QFD ID 747.

⁴⁹¹ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588*, no. 35, p. 443, QFD ID 1080.

⁴⁹² It is also possible that the fleets at Dungarvan and Carlingford were the same.

⁴⁹³ Henry F. Berry, ed. *Statute Rolls of the Parliament of Ireland, first to the twelfth years of the reign of King Edward IV* (Dublin: 1914), 5 Edward IV, A.D. 1465, p. 355.

⁴⁹⁴ As outlined in Chapter 2 and 3, in the early sixteenth century Baltimore was controlled by the Gaelic Irish O'Driscoll clan.

years.⁴⁹⁵ Any ship that wanted to anchor there had to pay fourpence sterling to the current lord of Baltimore. The lord also had the right to purchase any goods before they went to the market and would receive a discount of one in 20s. off the total price. If merchants or fishers sold their goods at the market, the lord would receive 8d. out of every 2s. One of the few goods explicitly mentioned in the rules was wine, with the lord receiving a tribute of one butt per four gallons of wine landed at Baltimore. The lord would also get a discount of 2d. on every additional gallon that was bought for personal use. The O'Driscolls were not alone in their appetite for wine; many Gaelic Irish lords imported wine for their personal use in the sixteenth century.⁴⁹⁶ Almost all wine imported to Ireland in this period came from France or Spain.⁴⁹⁷ The demand for wine in Ireland and the desire for fish among the continental fishers likely created an exchange that benefited both parties.

Every boat that came to Baltimore to fish had to pay a base tax of 9s. 2d. and a collection of foodstuffs three times a week.⁴⁹⁸ Every fisher who wanted to use a seine net had to get a special licence to do so.⁴⁹⁹ Additionally, the fishers paid 13s. for the use of a rock to dry their fish. There were also different rates applied to fishers using other parts of the coastline, with the areas 'between Fastness and the Stagges' being half price. Similar dues for drying fish on rocks were also levied by the Earl of Kildare at Ardglass in the early sixteenth century.⁵⁰⁰ The process of drying fish on rocks sounds very similar to the production of 'klipfish', which was Norwegian cod that was split, salted and dried on rocks.⁵⁰¹ Given the Norwegian method was used to process cod, it seems likely it was employed on white fish in Ireland too, with hake and cod being the most likely candidates. Figure 3.4 below shows a typical scene of klipfish production in Norway from the twentieth century. The method of preservation would have gone virtually unchanged since the early modern period.

⁴⁹⁵ O'Driscoll Inquisition, 1609, in O'Donovan, *The Genealogy of Corca Laidhe*, pp. 100-107; see also, O'Donovan, *Miscellany of the Celtic Society*, p. 9.

⁴⁹⁶ Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", pp. 148-153; for a specific study on the importance of wine to Gaelic Irish culture see, Katharine Simms, "Guesting and Feasting in Gaelic Ireland", *The Journal of the Royal Society of Antiquaries of Ireland* 108 (1978).

⁴⁹⁷ H. F. Kearney, "The Irish Wine Trade, 1614-15", *Irish Historical Studies* 9, no. 36 (1955), p. 405.

⁴⁹⁸ This was paid on Wednesday, Friday, and Saturday. The food required was 'a barrel of flour, a barrel of salt, a hogshead of beer, and a dish of fish'.

⁴⁹⁹ Seine nets will be discussed later in Section 3.4.2.

⁵⁰⁰ Gardiner and McNeill, "Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster", p. 6, the dues can be found in British Library (BL), Harleian MS. 37,556, rental and survey of the property of Gerald fitz Gerald, ninth earl of Kildare, f. 94v.

⁵⁰¹ Cutting, *Fish Saving*, p. 145; Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 52.



Figure 3.4 – Klippfish production, Kristiansund, Norway, 1922.⁵⁰²

Figure 3.5 on the next page is an image of rocks in a small bay at Trafraska, just outside Baltimore bay. These rocks have a similar shape to those depicted in the photograph from Norway. They are also flat and black, which meant they would absorb more heat to help dry the fish, although drying fish on rocks was very weather dependent and the process in Ireland may have required more salting than the Norwegian equivalent.⁵⁰³ However, is plausible that similar scenes to those in Norway could have been seen on rocks near Baltimore, Ardglass and elsewhere in Ireland during the sixteenth century. Perhaps in Ireland too, the work would have been carried out by a mixed workforce of women and men, as it is in the Norwegian image. Unfortunately, no records remain to inform us about the structure of the workforce in Baltimore. The practice of charging to dry fish was not unique to Ireland either; at Lydd, in Kent, visiting fishers in 1462 were charged by the local authorities for the privilege of drying their fish and nets.⁵⁰⁴ While not mentioned in the charges, other types of fish curing would have taken place at Baltimore as well, see Section 3.4.2 later in this chapter for a further discussion of these other processing methods.

⁵⁰² Anders Beer Wilse, "Klippfisk stacks in piles, Kristiansund, 11 August 1922." (Gallery Nor, 1922) https://www.nb.no/cgi-bin/galnor/gn_sok.sh?id=109451&skjema=2&fm=4.

⁵⁰³ Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", pp. 52-53.

⁵⁰⁴ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 441.

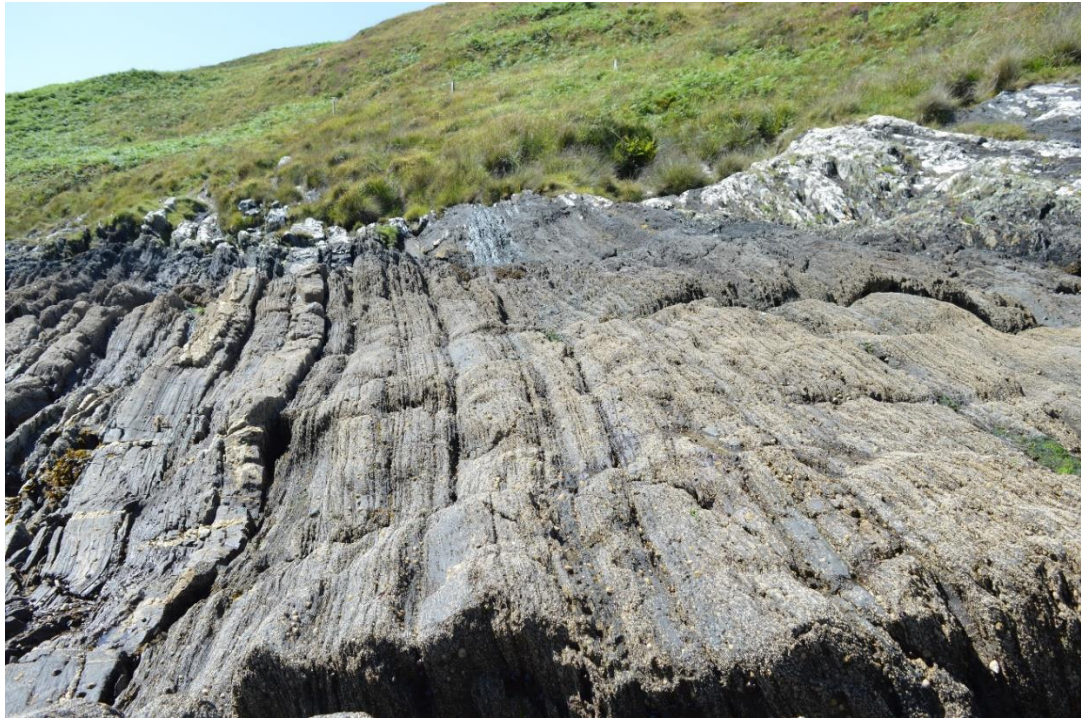


Figure 3.5 – Rocks at Trafraska, near Baltimore.⁵⁰⁵

There were separate charges for separate species at Baltimore too. If any fisher found a halibut (*hippoglossus hippoglossus*) they were required to give it to the lord in exchange for a barrel of butter; the concealment of said halibut carried a fine of 40s.⁵⁰⁶ These measures indicate that the halibut, which is a large flatfish, was prized by Gaelic Irish, likely because of its rarity and impressive size. Furthermore, every boat that came into the harbour had to pay 6s. 8d. per 100 white fish brought in. For every barrel of herring and pilchards sold on the open market the lord would receive 8d. from the seller. These charges tell us that white fish, probably hake, herring, and pilchards (when they were available), were the most critical species targeted at Baltimore.

There are several estimates from sixteenth-century sources that approximated the size of the Spanish fishery in Ireland. In April 1543, Anthony St Ledger sent a letter to King Henry in which he reported that '200 or 300' fishing boats sailed to Baltimore each year.⁵⁰⁷ In 1569, John Corbine wrote to William Cecil and warned him, 'The Spaniards will have good harbours on the southwest coast, at Berehaven, Crookhaven, Baltimore, O'Sullivan's river, Ballinskellig and Valentia'. He goes on further to say, 'The area is already fruitful to the Spaniards. Every year 200 boats fish here and take away beef, hides and tallow, paying no dues to the queen'.⁵⁰⁸ This

⁵⁰⁵ Photograph taken by the author at Trafraska, near Baltimore, 2020.

⁵⁰⁶ "Hippoglossus hippoglossus (Linnaeus, 1758) Atlantic halibut." (Fishbase.org, 2020) <https://www.fishbase.se/summary/1371>.

⁵⁰⁷ Steven and Murray, C.S.P. Ire., *Tudor Period 1509-1547*, pp. 349-350, no. 627, p. 349, QFD ID 757.

⁵⁰⁸ Cunningham, C.S.P. Ire., *Tudor Period 1568-1571*, p. 145, no. 362. QFD ID 1546.

figure seems similar to that provided by St Leger, but Corbine was trying to convince Cecil to attack the Gaelic Irish at this time, so it was also in his interest to exaggerate.

A document dated from 1572 provides the perspective of Humphrey Gilbard, an English colonist, on the Spanish fisheries. He wrote that '600 sail of ships and barks for fishing only' visited the south coast of Ireland each year. He describes that the Spanish 'lay aground' at Baltimore during the fishing season, and both 'Spaniards and Biscayans' used Great Blasket Island as a base for fishing. Gilbard's figures must be taken with caution; he was arguing for the plantation of Ireland and for the 'trade with Spain to be destroyed', so he may have inflated the figures to his advantage.⁵⁰⁹ However, the locations he provides are plausible and consistent with other evidence.

Later in 1583, Flynn O'Driscoll, the Lord of Baltimore, reported 100 fishing boats were heading to Baltimore in that year.⁵¹⁰ Much later, in 1605, O'Sullivan Beare wrote to Philip II of Spain and stated that in the past at least 500 Spanish fishing boats visited Berehaven each year.⁵¹¹ O'Sullivan wrote the letter while in exile in Spain, so it is likely he was attempting to overestimate the size of the fishery to gain more support from the Spanish king. There are, however, more reliable figures for the size of the fleet in the Spanish sources that will be discussed in the next section. An event in 1537 also gives us an indication of the size of the O'Driscolls' own fleet of boats. A fleet from Waterford had attacked Baltimore and burned the O'Driscoll castle on Sherkin Island. They also captured the galley of the O'Driscoll chief and seized 'above three or four score pinnaces' and burned another 50.⁵¹² Even allowing for some exaggeration, this is a sizeable fleet of small boats that the O'Driscolls could have used for both transport and inshore fishing. It is also possible these boats were rented out to visiting fishers who arrived in larger ships unsuitable for fishing in the small bays of the Cork coast.

Baltimore is the most detailed example of taxes being imposed on foreign fishers, but a plethora of other evidence shows it was a common practice in many Gaelic and Old English areas. For example, a report from 1580 describes the O'Sullivan's imposing similar taxes at Berehaven; here, larger boats, like skiffs, were charged 8s. 17d. for the right to fish, while a 'small boat' paid 6s. 8d. Similarly, there were charges for anchorage and for 'places to dry their fishe'.⁵¹³

⁵⁰⁹ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 290, pp. 422-423, QFD ID 790.

⁵¹⁰ Flynn O'Driscoll to Lord Burghley, 1583, SP 63/104 f.238, QFD ID 1039.

⁵¹¹ *Archivo General de Simancas* MS E. 1776, cited in Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", p. 92.

⁵¹² O'Donovan, *The Genealogy of Corca Laidhe*, pp. 94-95.

⁵¹³ Fulk Greville to his cousin Secretary Walsyngham, 2 July 1580, SP 63/74 f.4, QFD ID 976.

This account suggests that the system of taxation among the Munster coast was relatively consistent among the Gaelic families who controlled the best fishing spots.

The practice was not confined to Munster either. As mentioned above, in the 1540s, the O'Cahans signed an agreement with the English government promising they would no longer extract tributes from visiting fishers on the Bann.⁵¹⁴ In a letter to the Crown in 1557, Lord Deputy Sussex reports that James Mac Donnel 'desires peace' and offered to allow the English to fish the Bann as long as the fishers paid him the 'accustomed droits'.⁵¹⁵ These examples illustrate that several of the families around the River Bann also extracted taxes from visiting fishers.

Protection from attack was a crucial part of the service offered by the Gaelic lords in exchange for the dues paid by fishers.⁵¹⁶ For example, writing in 1531, Charles Smith reports an occasion when an English vessel captured a Spanish fishing boat off Dursey Island, near Berehaven. In response, Dermot O'Sullivan, who was chief of Berehaven at the time, took his ships out and captured both the English and Spanish vessels. Smith reports 'the English Captain he hanged and set the other at liberty'.⁵¹⁷ This incident is a clear example of the Gaelic Irish protecting the fishers in their waters. There were other benefits for the foreign fishers as well; they received a safe and suitable place to dry their fish and anchor their boats and access to markets where they could trade commodities, like wine, for fish. However, we should also keep in mind that if these fishers did not pay the dues required, they would not have been welcomed, and would have faced attack from the lords who controlled these coastlines. The Gaelic Irish positioned their settlements and fortifications to control the best fishing locations, so unless the visiting fishers paid, they would simply not have access to the best fishing grounds. However, despite the taxes, these distant water voyages must have been profitable for the fishers; otherwise, they had no reason to engage in them.

As mentioned, Old English lords and towns used similar methods as the Gaelic Irish to generate income from fisheries. For example, in 1537, the residents of Dungarvan collected a custom of 6s. 8d. and one hake from every fishing boat that landed in the town.⁵¹⁸ A survey taken in the 1540s records that the town of Ballyhack, just outside Waterford, welcomed 'all fishing boats of strangers', upon the donation of one 'large fish', or one hake if they had been fishing for

⁵¹⁴ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588*, no. 177, p. 202, QFD ID 774.

⁵¹⁵ A droit is a legal right or due. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 1: 1509-1573*, no. 28, p. 136, QFD ID 579.

⁵¹⁶ Breen, *The Gaelic Lordship of the O'Sullivan Beare*, p. 116.

⁵¹⁷ A. E. J. Went, "Foreign Fishing Fleets Along the Irish Coasts", *Journal of the Cork Historical and Archaeological Society* 54 (1949), p. 17.

⁵¹⁸ "The Irish Hake Fishery, 1504-1824", p. 42.

them. Boats also paid 'one penny-fish' if they had been catching smaller fish. The survey suggests the town relied more on the visiting fishers for income than those who were resident. The taxes and rent of the town were going to the Countess of Ormond when the survey was taken.⁵¹⁹

Additionally, in the early sixteenth century, the Earl of Kildare charged customs on the different types of ships and boats that landed at Ardglass. Fishers wishing to dry their fish also had to pay the Earl. The visitors were also required to give 'a chief fish to the castle' every time they came into port. Every herring boat also had to donate a mease of herring to the castle.⁵²⁰ As mentioned in the previous chapter, Ardglass and Strangford were leased out by the Crown in 1524 for £150, high rent for the period.⁵²¹ Therefore, this was not a practice limited to the Gaelic Irish, and Old English lords generated income from visiting fishers too, even in a relatively small port like Ardglass.

Before the dissolution of the monasteries in the 1530s and 40s, monastic houses too charged visiting fishers to use their infrastructure. For example, a statute from 1493 imposed a new custom on ships and fishing boats using the new pier at Skerries that had been constructed by Holmpatrick priory. They charged a poundage tax on any boats 'coming to those parts for fishing, for flask fishing, cod and herrings'.⁵²² In this instance, 'flask fishing' might refer to pot fishing for Nephrops, which we have few other historical references to from this period.

The elaborate nature of the duties in many Gaelic Irish and Old English areas indicates the importance of the visiting fishers to the local economy of these places. There are several potential reasons why the Gaelic Irish may have used this system, rather than catch and sell the fish themselves. Perhaps they lacked the trained workforce to conduct a large enough fishery themselves or did not have the required knowledge, although the latter seems unlikely. The visiting fishers were also clearly a good source of money, and they brought exotic goods, such as wine, to the area. The economic model used in Gaelic areas allowed the fish caught at places like Baltimore to reach a broader market that may have been otherwise inaccessible to the Irish.

We also know that the Irish did partake in subsistence fishing, with archaeological remains of stone traps at Rossglass and other places illustrating the occurrence of small-scale fishing in

⁵¹⁹ White, *Extents of Irish Monastic Possessions, 1540-1541, from Manuscripts in the Public Record Office, London*, p. 355.

⁵²⁰ Quinn, "Anlgo-Irish in Ulster in the Early Sixteenth Century", p. 64, from *The Kildare Rental*.

⁵²¹ *Ibid.*, p. 63.

⁵²² Philomena Connolly, ed. *Statute Rolls of the Irish Parliament, Richard III - Henry VIII* (Dublin: Four Courts Press for the National Archives of Ireland, 2002), Statute roll, 8 Henry VII, p. 141.

the early modern period.⁵²³ However, if Gaelic Irish clans intended to make large catches of fish above their subsistence needs, they lacked a critical resource for preserving this fish: salt. Ireland had virtually no indigenous sources of salt in the early modern period.⁵²⁴ Almost all early modern techniques for preserving fish required salt and any fish that was not consumed locally needed to be preserved before it was transported.⁵²⁵ Therefore, the Irish lacked the resources locally for preserving fish and the means to bring this fish to broader markets. They could have imported salt from France and Portugal, as the English did, but the Irish also had limited goods to exchange for salt.⁵²⁶ After fish, hides were the second most export commodity from Ireland to Bristol in the early decades of the sixteenth century, and these too needed salt to process.⁵²⁷

Foreign fishers brought salt with them, which cut out the need for local supplies. Furthermore, the Irish could exchange fishing rights for salt that could be used on other products such as hides, or for their preserving meat and fish. Ultimately, the exchange of goods and money for the right to fish benefited both parties. The Irish had ample fishing resources and could trade access for both luxury goods and mundane necessities like salt. As Colin Breen writes, the presence of foreign fishers shows the Gaelic Irish were not economically backward, but 'instead had comprehensive economic management systems in place' to profit from their physical and cultural environment.⁵²⁸ However, as the sixteenth century progressed, the English authorities and their allies in Ireland became increasingly concerned with the income visiting fishers brought the Gaelic Irish and rebellious Old English lords. The English were also concerned by the number of Spanish and French fishers visiting Ireland, and the potential military and religious consequences this could have. The English response to foreign fishers and how foreign fisheries were impacted by policy decisions and conflict is further explored in Chapter 5.

3.3.4 Spanish Distant Water Fisheries

The data collected for this study showed that the Spanish were the second most frequent visitors to Ireland for fishing. The work of Michael Barkham in the Spanish archives provides an instrumental insight into this activity from the Spanish perspective: most of the Spanish

⁵²³ Breen, "A Medieval Fishery at Rossglass, Co. Down", p. 155.

⁵²⁴ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 163.

⁵²⁵ See, Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data".

⁵²⁶ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 227/

⁵²⁷ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 59.

⁵²⁸ Breen, *The Gaelic Lordship of the O'Sullivan Beare*, p. 115.

fishers who travelled to Ireland for fishing came from the Basque Country in northern Spain.⁵²⁹ The reasons why Basque fishers came to Ireland are manifold. The region itself was mountainous with poor agriculture, but it did have an abundant supply of oaks and iron to make ships.⁵³⁰ Given this, the Basques looked outward to the ocean to expand their economic activity. They did not just come to Ireland but travelled to fish in Galicia, England and elsewhere.

Additionally, Basques whalers hunted in the Bay of Biscay from at least the twelfth until the fifteenth centuries when they began to go further out into the Atlantic to find whales.⁵³¹ These distant voyages were necessary due to centuries of overhunting that reduced whale populations closer to Spain.⁵³² From the early decades of the sixteenth century onward, Basques also began to travel across the Atlantic in increasing numbers to fish and hunt whales in Newfoundland and Labrador respectively.⁵³³ The Basques were some of the first European fishers to exploit these waters. Once again, their activity in Ireland played a role in preparing them for later voyages across the Atlantic. However, we know substantially more about the Basque Newfoundland fishery than we do about the Irish fishing that predated it.

Evidence from Spanish ports suggests that the Basques were fishing in Ireland from at least the fourteenth century.⁵³⁴ This activity continued into the sixteenth century, and according to Barkham, the main targets of the Spanish fishery in Ireland were hake, conger eel and herring or pilchards (depending on which was present).⁵³⁵ These target species are very similar to those sought by the English, apart from conger eel. The Spanish ships that travelled to Ireland left for the fishery in June or July and would often not return to Spain until October or November, if not later.⁵³⁶ The timing of these voyages suggests they came to Ireland initially for the hake fishery, with some vessels perhaps staying longer to catch the early autumn spawning herring. These periods are similar to those of the English fishers reported earlier, only that the English left Ireland slightly earlier. Barkham suggests that Spanish fishers mostly frequented the south

⁵²⁹ Barkham, "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650"; "The Spanish Basque Irish Fishery & Trade in the Sixteenth-Century"; "La Industria Pesquera en el País Vasco Peninsular al Principio de la Edad Moderna: ¿una edad de oro?"

⁵³⁰ "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", p. 229.

⁵³¹ Jean-Pierre Proulx, "Basque Whaling in Labrador in the 16th Century", *Studies in Archaeology, Architecture and History* (1993), p. 12.

⁵³² Alex Aguilar, "A Review of Old Basque Whaling and its Effect on the Right Whales (*Eubalaena glacialis*) of the North Atlantic", *Report - International Whaling Commission* 10 (1986).

⁵³³ Barkham, "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", 241.

⁵³⁴ *Ibid.*, p. 231.

⁵³⁵ *Ibid.*, p. 231.

⁵³⁶ *Ibid.*, p. 234.

coast between Baltimore and Valencia, and Killybegs in Donegal, an assertion supported by the data collected for this study.⁵³⁷

The journey of the *Santa Maria* in 1511 provides a detailed example of a typical Spanish voyage to Ireland. The charter party of the ship records that by 29 June 1511 the master was meant to have loaded 'six pinnaces for hake and one for killing sardines' onto the ship. Two of these pinnaces had a crew of five men, and four had a crew of four men. These figures would give the ship a minimum crew of 26. These figures are very similar to the five men crews described for the English herring fishery at Carlingford.⁵³⁸ The ship was to sail from Lekeitio to La Rochelle where it would buy salt to cure the fish. From La Rochelle the ship was meant to navigate to the Aran Islands to make its catch. The ship was to stay there until Christmas Day and then travel to Cadiz to sell the fish. Though, if the ship could not sell its catch in Cadiz, it was allowed to travel further to a town near Rome to sell the fish.⁵³⁹ This example shows the complex nature of these voyages, involving ships from the north of Spain, French salt, and markets in the central Mediterranean.

Concerning the size of the Spanish fleet, Barkham writes that in peaceful years the Spanish Basque fishery in Ireland 'consisted of 20-30 small and medium-sized ships crewed by a total of 300-500' fishers.⁵⁴⁰ A census of ships conducted in the province of Gipuzkoa in the Basque country from September 1534 recorded that 76 ships operated from the port that year, and of these, 15 travelled to Ireland with a total crew of 250 to 300 fishers. The fleet consisted of 11 caravels and four 'naos', and the ships were expected back in Spain by mid-November. It is likely they were targeting herring if they were remaining on the coast that long. Barkham estimates that another similar number of ships would have travelled from other Basque ports which were not included in the census.⁵⁴¹ Given this, the total estimate is 30 ships with an upper estimate of 600 crew. If the fishers operated in crews of five, that would mean 120 pinnaces. That would require each large ship to carry four pinnaces, which is within the number carried by the *Santa Maria* as described above. These figures are again an upper estimate, but given the evidence, they seem plausible and realistic for the period.

Additionally, the figure of 120 small boats seems more plausible than most of the estimates for the size of the Spanish fishery from the English and Irish sources discussed above. As

⁵³⁷ Ibid., p. 234.

⁵³⁸ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 70, p. 85, QFD ID 769.

⁵³⁹ Barkham, "The Spanish Basque Irish Fishery & Trade in the Sixteenth-Century", pp. 235-236, from ARChV: reales ejecutorias, 318/10.

⁵⁴⁰ "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", p. 240.

⁵⁴¹ Ibid., p. 240.

mentioned, it is more difficult to estimate how these numbers may have fluctuated year on year, but what does seem evident is that Spanish activity in Ireland diminished over the sixteenth century. A combination of factors drove this decline; for example, Section 3.3.6 discusses the rise of the Newfoundland cod fishery, while Chapter 5 discusses the impact of conflict and Chapter 6 the influence of environmental change. The Spanish fleet was likely smaller than the English but would still have had a significant impact on the local economy. Furthermore, the Spanish seem to have almost exclusively visited Gaelic Irish regions. The Irish had a complex system of taxation in place to exploit this and profited greatly from the Spanish visitors. That profit would increasingly frustrate the English authorities as the sixteenth century progressed, and it would lead eventually to the violent takeover of the most important Gaelic Irish fishing sites.

Finally, while more challenging to illustrate, the presence of Spanish fishers on the Irish coast undoubtedly had a cultural impact in Ireland. This Spanish influence is visible on a map of Ireland drawn by John Goghe in 1567, shown below (Map 3.6). On this map, what we call the Celtic Sea off the southern coast is named 'The Spanish Sea', which at times it most certainly was.



Map 3.6 – Hibernia, by John Goghe, 1567.⁵⁴²

⁵⁴² John Goghe, "Hibernia: Insula non procul ab Anglia vulgare Hirlandia vocata", 1567 (The National Archives, Kew: MPF 1/68).

3.3.5 French Distant Water Fisheries

Compared to the English and Spanish, we know considerably less about the French fishery in Ireland during the medieval and early modern periods. This lack of knowledge is in part because we lack published studies in English on the relationship between France and Ireland during this period. However, some material has been published in English and French that illuminates this topic to some degree, and new archival research in France holds great potential to tell us a lot more.

Notarial records from Bordeaux in the sixteenth century show that many French shipowners combined both trading and fishing in their voyages to Ireland. For example, in 1534, the *Isabelle de Losquirec* was chartered in Bordeaux by merchants from Dingle, with a cargo of wine. The merchants agreed that the ship would stop at Loctudy on route to Dingle, to pick up a crew of seven. The crew were meant to unload the wine in Dingle, and then the ship would 'set out fishing off the Irish coast before sailing back to La Rochelle with fish'.⁵⁴³ While only one example, this voyage further corroborates the idea that visiting fishers traded wine for the right to fish in Ireland. It was also more profitable for the fishing vessels to arrive in Ireland with a full cargo for sale or exchange, rather than arrive with an empty hold. There is similar evidence that Breton fishers from Cap Sizun would travel to Bordeaux each year to exchange their hake for wine.⁵⁴⁴ It is not clear how much of this hake was caught in Ireland, but given the proximity of Brittany to Ireland, it is feasible that some portion of it was.

The letter from Anthony St Ledger to King Henry in April 1543 also elaborates on the presence of foreign ships on Irish shores. St Leger writes that the east coast was mostly 'frequented mostly by English, and by Bretons and Spaniards in time of peace'. The north coast, 'by Bretons and Scots in both peace and war, and those of the west, to which no Englishmen come save to Galway and Limerick, by Spaniards and Bretons at all times'. St Ledger also wrote that the Gaelic Irish of Munster traded hides for 'salt, iron, guns and powder' but makes no mention of fish.⁵⁴⁵ St Ledger's letter reveals that those areas furthest away from English control were more open to Spanish, French, or Breton ships, especially during times of war with England.

Further evidence for Breton fisheries in Ireland comes from a letter written by Sir Thomas Phillips in 1611 during the planning for the Ulster Plantation. Phillips notes, 'There was long since at Port Rush a fishing used by Bretons in France who came every season thither for dogfish and rays'. He writes that the fishers sold their catch in Spain where the fish were a

⁵⁴³ Bernard, "The Maritime Intercourse Between Bordeaux and Ireland, c. 1450 - 1520", p. 15.

⁵⁴⁴ *Ibid.*, p. 15.

⁵⁴⁵ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, pp. 349-350, no. 627, p. 349, QFD ID 757.

'great commodity'.⁵⁴⁶ The discussion of dogfish⁵⁴⁷ and ray (*Raja clavata*) fishing is unusual, as the species are not mentioned in many other accounts from this period.⁵⁴⁸ Despite the unique species, this is more evidence from the Irish perspective that Breton visitors came to the Irish coast to engage in fishing.

Ships from the French Basque country also took part in the Irish fishery. For example, a notarial record from La Rochelle in 1540 records a bottomry loan to the *Trinity* of Saint Jean de Luz, which is near the Spanish border. The loan stipulated that the ship would go to Ireland to fish hake and herring but does not mention an exact fishing location.⁵⁴⁹ Chapter 4 will discuss further what these notarial records can tell us about the scale of French trade with Ireland in the fifteenth and sixteenth centuries.

Most visiting fishers, including the French, probably did not come to Ireland every year but decided on an annual basis what voyage would provide them with the most profit. As mentioned, hake spawning also shows substantial interannual variability, so in some years the hake would have been particularly abundant in the Bay of Biscay, and other years there would have been better catches in the Celtic Sea and off the coast of Ireland.⁵⁵⁰ Fishers likely knew about these fluctuations and shared information as to the location of the best fishing prospects each year.

While we cannot be sure how much French hake fishing took place in Ireland, we can be confident it declined over the sixteenth century, and evidence found in local records in France illustrates this. The money received by the governor of Penthievre on the Brittany coast from the hake fishery there declined sharply over 100 years from 1,200 livres in 1536 to only 80 in 1637; Figure 3.6 on the following page shows the complete trend.⁵⁵¹ This decline follows a similar pattern to that of the qualitative evidence in Figure 3.1 earlier; that data indicated that mentions of French fishing in Ireland were rare, but became non-existent after 1568. The decline of the French hake fishery happened for a variety of reasons. From the late sixteenth

⁵⁴⁶ Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 95, p. 150, QFD ID 910.

⁵⁴⁷ This could be *Scyliorhinus canicular*, "Scyliorhinus canicula (Linnaeus, 1758) Lesser spotted dogfish." (Fishbase.org, 2020) <https://www.fishbase.se/summary/845>, or *Scyliorhinus stellaris*, "Scyliorhinus stellaris (Linnaeus, 1758) Nursehound." (Fishbase.org, 2020) <https://www.fishbase.de/summary/854>.

⁵⁴⁸ While we cannot be certain, this was likely "Raja clavata (Linnaeus, 1758) Thornback ray." (Fishbase.org, 2020) <https://www.fishbase.se/summary/2059>.

⁵⁴⁹ BL sur La Trinité de StJDL et, ADCM, 3E-9, 17-04-1540, Notarial records of Pelloquin, material kindly provided by Dr Bernard Allaire from the NorFish project team.

⁵⁵⁰ *Report of the Working Group on the Assessment of Southern Shelf Stocks of Hake, Monk and Megrim (WGHMM)*, p. 53.

⁵⁵¹ Camille Vallaux, *Penmarch, Aux XVI et XVII Siècles* (Société Nouvelle de Librairie et D'édition, 1906), p. 23.

century the wars of religion in France severely disrupted normal fishing operations in Brittany.⁵⁵² Additionally, the Newfoundland cod fishery superseded the hake fisheries and took control of the market. This is discussed further in the following section.



Figure 3.6 – Governor's income from Penthièvre hake fishery, 1536-1637.⁵⁵³

While the evidence for French fishing in Ireland is absent in the last few decades of the sixteenth century, there are some indications French merchants still traded in Ireland. For example, 1601, an English ship captain, Captain Charles Plessington, wrote reports while on patrol on the Irish west coast, providing details on the French trade that used to take place there. He wrote 'every year, till now, this coast was much frequented with French-Men'. Plessington claimed French merchants commonly carried cargos of 'wines, salt and other commodities', 'which they did commonly discharge in the harbour of Killybegs, Donegal, Ballyshannon and Sligo: and from here they lade hides, tallow and fish'. He also reported that in the summer of 1600 one French merchant brought 60 tonnes of wine to 'Donegal Abbey'.⁵⁵⁴ This letter illustrates that the French trade with the west of Ireland continued at least until the end of the sixteenth century. However, it provides no evidence that the French were still conducting fishing expeditions at this point. That said, the mention of fish does suggest that some exchange was still taking place involving goods like wine for fish, but we have no way of knowing the scale of this trade.

⁵⁵² Ibid., and personal correspondence with Dr Bernard Allaire of the NorFish team.

⁵⁵³ Camille Vallaux, *Penmarch, Aux XVI et XVII Siècles*, p. 23.

⁵⁵⁴ Captain Charles Plessington to the Earl of Nottingham, Lord High Admiral, and Secretary Cecil, 2 Sept 1601, SP 63/209/1 f.148, QFD ID 1397.

The problem of scale extends to all the French fishing activity in Ireland, unlike the English and Spanish, there is not enough data to estimate the number of French fishing ships that visited Ireland in any one year. That question will have to remain unanswered until further evidence is discovered in the French archives. There is also scant archaeological evidence for the presence of French, or any foreign, fishers in Ireland. Unfortunately, by its nature, this type of transient fishing activity left little physical evidence behind.⁵⁵⁵ Although, more work remains to be done in this area to fully uncover and understand the material culture left behind by visiting fishers.

However, there is material evidence to suggest a strong connection between parts of Ireland and continental Europe. For example, archaeologists have uncovered stockpiles of European pottery at Dunboy Castle near Berehaven in west Cork. Some of this pottery originated from Saintonge on the west coast of France and dated from the early sixteenth century. Other sherds from this area originated from northern France, the Netherlands and Ming China.⁵⁵⁶ Overall, pre-1601 pottery discoveries at this site were dominated by continental finds, while the seventeenth-century assemblages were 'almost exclusively English', which speaks to the radical change in ownership that occurred in the area in the early seventeenth century.⁵⁵⁷ Although, it is difficult to date pottery accurately, and later English settlers would have also used pottery from France and elsewhere. Despite these limitations, the material culture provides another indication that Gaelic Irish families, like the O'Sullivan's of Berehaven, had robust connections to continental Europe that were centred around their fishing resources.⁵⁵⁸

3.3.6 The Shift to Newfoundland

During the sixteenth century, English, Spanish and French fishers began to make their way across the Atlantic Ocean to fish in Newfoundland. The distant waters fisheries in Newfoundland had many commonalities with those that had come earlier in Ireland. This section considers how fisheries in Ireland acted as a precursor to operations in Newfoundland and how the Newfoundland fisheries impacted fishing ventures in Ireland. Chapter 6 will further explore the role of Irish fishers in Newfoundland, but this section is interested in foreign fishers who formerly operated in Ireland.

⁵⁵⁵ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 171.

⁵⁵⁶ *Ibid.*, p. 172.

⁵⁵⁷ Breen, *The Gaelic Lordship of the O'Sullivan Beare*, p. 116.

⁵⁵⁸ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, pp. 171-172.

As mentioned, one of the primary targets of visiting fishers in Ireland was hake. The fishing of hake relates directly to the later fishery in Newfoundland, which focused almost exclusively on cod. Cod and hake are closely related; they are both white fish and are in the same taxonomic order of Gadiformes.⁵⁵⁹ As mentioned, the process of drying fish on rocks at Baltimore was likely related to hake fishing, and similar methods would later be used in Newfoundland to dry cod.⁵⁶⁰ A promissory note made in San Sebastian in 1506 promised 'twenty cargass of cured hake from Ireland, half of which dried in Ireland and the other half dried in this land'.⁵⁶¹ This record backs up the idea that fishers dried hake on rocks, but also shows that 'wet' fish could be brought back and dried later. 'Wet fish' refers fish that was not wholly dried out, but rather salted and packed together.⁵⁶² These same methods of drying fish and transporting 'wet' fish would be employed in the Newfoundland fishery by the Spanish, French, and English.

The Basques were some of the first European fishers to exploit these waters. Barkham writes that Basque 'fishing and whaling voyages' to Ireland and elsewhere were clearly 'precursors of the transatlantic cod fishing and whaling expeditions to Terra Nova'.⁵⁶³ Salted and dried cod from Newfoundland, or bacalao as the Spanish call it, would later take on an important cultural and culinary role in Spain and Portugal.⁵⁶⁴ Additionally, similar systems of organisation and finance used by fisheries on voyages to Ireland were employed later in Newfoundland.⁵⁶⁵

By the 1540s, French vessels were also commonly visiting the waters of Newfoundland. In 1540, Spanish cartographer, Alonzo de Santa Cruz, noted that there was a 'great abundance of fish' in Newfoundland 'for which reason many Bretons and Irish come there every year to fish'. He wrote that the cod caught in Newfoundland was commonly shipped to France and Galicia to be sold.⁵⁶⁶ The mention of Irish fishes in Newfoundland is intriguing as it would place Irish fishers in Newfoundland at an early date.⁵⁶⁷ Additionally, ships sailing from Wexford to

⁵⁵⁹ "Merluccius merluccius (Linnaeus, 1758)." (Fish Base, 2020)

<https://www.fishbase.de/Summary/SpeciesSummary.php?ID=30&AT=Hake>.

⁵⁶⁰ Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 53.

⁵⁶¹ Barkham, "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", p. 234.

⁵⁶² Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 46.

⁵⁶³ Barkham, "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", p. 232.

⁵⁶⁴ Regina Grafe, *Distant tyranny: markets, power, and backwardness in Spain, 1650-1800* (Princeton University Press, 2012), pp. 52-79.

⁵⁶⁵ Pope, *Fish Into Wine*, p. 16.

⁵⁶⁶ David B. Quinn, *New American World. A Documentary History of North America to 1612* (London: Macmillan, 1979), pp. 276-7, quoting from Alonso de Santa Cruz, *Circa 1540. Alonso de Santa Cruz on the geography of Northeastern North America after Gomes. In his Islario general de todas las islas del mundo*, edited by Antonio Blázquez (Madrid 1922), pp. 434-443.

⁵⁶⁷ Chapter 6 will discuss the voyages of Nicholas Weston to Newfoundland later in the sixteenth century.

Chester in 1566 carried small amounts of Newfoundland fish, but these were isolated shipments, and there is little other evidence to support what Alonzo wrote.⁵⁶⁸ However, it does seem plausible that some vessels from Old English towns, like Wexford, were involved in the Newfoundland fishery from the 1540s, although it is unlikely their numbers rivalled that of the Spanish or French. It is also possible that Breton ships had Irish crew members, and that this was facilitated by earlier relationships formed when the Bretons visited Ireland.

In the late sixteenth and early seventeenth centuries, the Basque and French fishers were pushed off the shores of Newfoundland by the English.⁵⁶⁹ Despite this, there remained a demand for Newfoundland cod in Spain, which was fulfilled by English fishers and merchants. A large portion of the cod brought to Spain by the English was exchanged for wine that was in turn transported back to England. In his book, *Fish into Wine*, Peter Pope explores this 'triangular trade' in detail. The triangle, in this case, being between Newfoundland, England and Spain.⁵⁷⁰ A similar trade may have been at play in Ireland before the rise of the Newfoundland fishery. As outlined earlier, there are several examples of wine being imported to Ireland by fishers. It is hard to know if this trade was substantial, but it does seem that the trade of wine for fish existed in Ireland before it became a much larger exchange when the English exploited Newfoundland.

Kowaleski writes that the English fishery in Newfoundland was part of a broader westward shift that first began in Ireland and Iceland.⁵⁷¹ Again, the methods developed for processing, transporting and fishing in Ireland were employed later in Newfoundland.⁵⁷² The same is true of French fishers who entered into the Newfoundland trade before the English.⁵⁷³ Ireland was not the only location these fishers developed their methods, but it was part of the process and played a vital role in the westward expansion of the European fisheries.

3.3.7 Distant Water Fisheries Conclusion

Distant water fisheries were a large part of the marine economy of fifteenth and sixteenth-century Ireland. The principal operators of this activity were internal Old English fishers, English, Spanish and French fishers. While each of these groups had their distinct practices,

⁵⁶⁸ Wilson, *Chester Customs Accounts, 1301-1566*, pp. 88-89.

⁵⁶⁹ Barkham, "The Offshore and Distant-Water Fisheries of the Spanish Basques, c.1500-1650", p. 243.

⁵⁷⁰ Pope, *Fish Into Wine*.

⁵⁷¹ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 442.

⁵⁷² *Ibid.*, p. 443.

⁵⁷³ Turgeon, *The Era of the Far-Distant Fisheries: Permanence and Transformation (circa 1500-1850)*.

they also shared several common traits. Most of the time they were targeting the same species, hake during summer operations, and herring during the autumn and winter. All these fisheries relied on systems of capital investment back in their home countries and had similar methods to share profits between investors, masters, and crew. They all used small boats, mainly pinnaces, to fish. French and Spanish fishers travelled to Ireland in larger craft and carried their small boats on the decks of their ships, while English fishers could sail directly to Ireland in smaller vessels.

There were some geographical differences in fishing locations between the groups, as highlighted in Map 3.2. The English and Old English had exclusive access to fishing at Carlingford and other fishing locations in Ulster. French and Spanish fishers almost always visited Gaelic Irish regions, but so did English and Old English fishers at times. In the fifteenth and early sixteenth centuries, the Gaelic Irish were essentially a neutral third party that facilitated fishing for the visiting groups of fishers. They did not conduct any intensive sea fishing of their own, but instead provided access, protection, and space for the visitors to make and process their catch. As demonstrated above, Old English areas provided similar spaces, but perhaps for a less diverse range of fishers compared to the Gaelic Irish.

In order to profit from these visiting fishers, the Irish created a complex system of taxation and charges that allowed them to generate income from marine resources that were otherwise out of reach. There are several potential reasons why the Gaelic Irish did not catch fish themselves and instead chose to facilitate the fisheries for others. For starters, they lacked the salt for preserving fish locally, and the presence of foreign fishers gave the Irish access to broader markets. By trading access to fisheries, the Gaelic Irish gained access to money and luxury goods from continental Europe. Ultimately, the extent of foreign fisheries in Ireland and their long history from the fourteenth to sixteenth centuries show us they were beneficial to all parties in that period.

It is also clear that the rise of the Newfoundland fishery was related to the decline of the Irish distant water fisheries. The French and Spanish were first to leave Ireland in favour of Newfoundland, followed later by the English.⁵⁷⁴ The Newfoundland fishery was a significant draw for European fisheries, and its discovery by Europeans in 1497 drew fishers away from the Irish coast. However, Chapter 5 will also argue that local conditions in Ireland in part pushed visiting fishers away from Ireland and made Newfoundland a more appealing prospect.

⁵⁷⁴ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

Foreign fisheries are a difficult topic to study. These fishers only visited for a short time each year, and as mentioned, the visitors left little in the way of an archaeological footprint for us to interpret.⁵⁷⁵ Furthermore, the documentary evidence outside Ireland is scattered among several European countries and exists in several different languages. Nevertheless, this study has shown that by compiling existing secondary literature and the available documentary evidence from Ireland, we can understand the phenomenon of foreign fishers to a far greater extent than has been possible previously. Additionally, the remains of pottery at sites like Dunboy provides further proof of a healthy exchange between Gaelic Ireland and continual Europe. However, much remains to be discovered. New archaeological excavations and methods, combined with new manuscript research in Ireland and Europe, hold great potential to reveal much more about these fisheries that were so vital to the economic life of Ireland.

3.4 Fisheries Organisation and Methods

This section will further explore what qualitative and visual sources reveal about how fishers organized their operations, as well as what methods and gear they utilized to make their catches in the sixteenth century.

3.4.1 Fisheries Organisation

Some fishing boats operated on an individual basis, with the organisational structure kept within the confines of a single ship. However, even these ships were subject to rules and regulations once on the Irish shore. The O'Driscoll inquisition from 1609 reported that Kinsale had previously elected a fishing admiral each year. This admiral and the Lord of Baltimore joined 'in settling orders for the fishing' on the coast between the two towns. The fishing admiral held court every Monday where fines were handed out for those who broke the rules. For example, the admiral would extract a 11s. 6d. fine for every act of 'bloodshed'.⁵⁷⁶ The revenues from these fines were to be shared between Baltimore and Kinsale. The rules stipulated that if Kinsale did not send an admiral, then the Lord of Baltimore could appoint his own. The cooperation between the Old English town and Gaelic Irish is a fascinating aspect of this account. Fishers had the freedom to travel anywhere along the coast, and the standard set of rules and mechanisms through which to enforce them clearly benefited everyone.

⁵⁷⁵ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 171.

⁵⁷⁶ O'Driscoll Inquisition, 1609, in O'Donovan, *The Genealogy of Corca Laidhe*, p. 105.

A letter sent in 1567 relates that the mayor of Waterford also acted in the capacity of fishing admiral and was charged with 'keeping order among the fishers'.⁵⁷⁷ A deposition from the Admiralty Court, also recorded in 1567, describes a similar system in Wales. It details that Rice ap Edward was elected as the fishing admiral in Wales that year. His role was to oversee 'all contracts, conventions and punishment of fishermen using the seas of Ireland and certain places in Wales'. Like the admiral in Baltimore and Waterford, he would collect fines for breaches of the rules, and in 1567, he collected a total of 23s. 8d. from the fishers.⁵⁷⁸

Edward recounts to the court that the Welsh admiral was elected yearly by the fishers themselves. Edward provided this deposition because some of the Welsh fishers who were 'fishing for herring at Dovey' got into a 'quarrel' with the local vice-admiral, Sir Nicholas Arnold.⁵⁷⁹ In the sixteenth century, the English admiralty had a network of local admirals who would control and protect the coast in their regions. The dispute seems to have arisen because Arnold perceived that Edward, as the fishing admiral, was a threat to his authority and accused him of extorting money from the fishers. In his defence, Edward reported, 'he has taken no money off any of the said fishermen, except such as has been accustomed to being taken for offences committed by them'.⁵⁸⁰

It is notable how similar the system described by Edward is to the one detailed for Kinsale, Baltimore and Waterford. These examples suggest that the election or appointment of a central fishing admiral was a common organisational method among fishers in Ireland and Britain in the sixteenth century. The dispute between the fishing admiral and naval admiral in Wales also suggests that, as time went on, these types of independent fisheries organisations ran into conflict with the Tudor state, which was seeking to expand its control in all economic activities. Historians have observed similar disputes between fishing towns and the central government in sixteenth-century England.⁵⁸¹ Ultimately English government officials felt fisheries were too important to be left in the hands of the fishers or local towns and sought to impose greater

⁵⁷⁷ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 595, p. 253, QFD ID 634.

⁵⁷⁸ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 145, p. 28, QFD ID 14.

⁵⁷⁹ *Ibid.*, p. 28, no. 146. Dovey is an anglicised spelling of the River Dyfi in central Wales.

⁵⁸⁰ *Ibid.*, p. 28, no. 145. QFD ID 14.

⁵⁸¹ David M. Dean, "Parliament, Privy Council, and Local Politics in Elizabethan England: The Yarmouth-Lowestoft Fishing Dispute", *Albion: A Quarterly Journal Concerned with British Studies* 22, no. 1 (1990); G. R. Elton, "Piscatorial Politics in the early Parliaments of Elizabeth I", in *Business Life and Public Policy*, ed. Neil McKendrick and R. B. Outhwaite (Cambridge: Cambridge University Press, 1986); R. C. L. Sgroi, "Piscatorial Politics Revisited The Language of Economic Debate and the Evolution of Fishing Policy in Elizabethan England", *Albion: A Quarterly Journal Concerned with British Studies* 35, no. 1 (2003).

control.⁵⁸² In the Irish case, the expansion of English authority late in the sixteenth century completely removed old structures of Gaelic and Old English cooperation and governance that supported the appointment of admirals in places like Baltimore and Kinsale.

3.4.2 Fishing Methods, Preservation, Gear and Boats.

Fishers in Ireland also employed several different methods and types of fishing gear in their pursuit of catches. Generally, the target species determined what type of method and gear used by each fisher. Local coastal conditions and their level of access to different technologies also had an impact. Arthur Went has written extensively on historical fishing methods used in Ireland.⁵⁸³ His work focused on the methods used for riverine fish, particularly salmon, but many of the methods used for species like salmon were also used for marine fish like herring and hake.

One of the most fundamental technologies used to fish at the time was the hook and line. The purest form of this method was the handline, which held a single hook. The longline was a more intensive form of fishing that used lines with multiple hooks. The longest of these could hold hundreds of hooks and be kilometres in length, even in the early modern period.⁵⁸⁴ There is scant documentary evidence for the use of the hook and line in Ireland, and what is available has been summarised by Arthur Went.⁵⁸⁵ However, despite the lack of direct evidence, we have to assume the method was used in Ireland because it was such a pervasive and fundamental technology across Europe.

Generally, fishers used hook and line on larger fish, such as hake and cod.⁵⁸⁶ Targeting a smaller species like herring with this method would have been very inefficient. We have no direct description of hake fishing methods in Ireland, but fishers in later Newfoundland cod fishery used hook and line commonly.⁵⁸⁷ Given this, it is likely that fishers employed similar

⁵⁸² For more see, "Piscatorial Politics Revisited The Language of Economic Debate and the Evolution of Fishing Policy in Elizabethan England".

⁵⁸³ Went, "The Galway Fishery. An Account of the Modes of Fishing Together with Notes on Other Matters Connected with the Fishery"; "Eel Fishing at Athlone: Past and Present"; "Fishing Scenes from Irish Topographical Prints", *The Journal of the Royal Society of Antiquaries of Ireland* 81, no. 2 (1951); "The Pursuit of Salmon in Ireland"; "'Sweeper' Nets for Salmon in County Kerry", *The Journal of the Royal Society of Antiquaries of Ireland* 102, (1972); "Historical Notes on the Fisheries of the Estuary of the River Shannon".

⁵⁸⁴ Peter Jones, "Technological Innovation and Resource Management in the Fisheries of the British Isles, ca.1400-1900" (PhD diss., University of Strathclyde, 2016), p. 195.

⁵⁸⁵ Went, "The Pursuit of Salmon in Ireland", p. 199.

⁵⁸⁶ C. F. Hickling, *The Hake and the Hake Fishery* (London: Edward Arnold & Co, 1934), pp. 32-34.

⁵⁸⁷ Cutting, *Fish Saving*, p. 255.

methods in the earlier Irish hake fishery. The line portion of the hook and line could also be suspended at different levels in the water column to bring it to a required depth to target a particular species.⁵⁸⁸ Fishers likely knew the daily cycles of their target species and would set their lines accordingly. For example, hake would stay lower in the water column during the day and rise to the surface in the evening and at night.⁵⁸⁹ Given this behaviour, if fishers weighted their lines correctly, they could target the fish during the day or night.

So, while the hook and line were a simple technology, fishers could employ it in ingenious ways that exploited particular species' traits and behaviours. Furthermore, with enough fishing effort the hook and line could be employed to make significant catches.⁵⁹⁰ Laurier Turgeon has written that fishers could 'catch 300-400 hake on the coasts of Brittany, using a hand-held line' in a single season.⁵⁹¹ We can assume similar catches were possible in Irish waters. Comparatively, Turgeon claims a good fisher could catch the same number of cod in a single day in the more abundant waters of Newfoundland.⁵⁹² Other studies have further demonstrated that primitive technology such as the handline, could have a surprising and potent impact on fish stocks in the past.⁵⁹³

Just as important as fishing methods were the processes for preserving fish. Without preservation, no commercial fishery could exist. Fish simply rots too quickly to be brought to distant markets without processing. Maryanne Kowaleski attributes improvements in curing methods to the growth of the south-west English fisheries in the late medieval period. In that period, Dutch fishers employed the most technically advanced methods for curing herring, gutting, and salting their catch on board ships before repackaging it on land for transport to distant markets. Kowaleski writes that there is some evidence that English fishers adopted some of these methods too, but they also set up curing stations on land, including in Ireland.⁵⁹⁴

The records of imports to England from Kowaleski sources and the Bristol Port Books speaks to the wide variety of cures used in Ireland. The trade records indicate that herring was imported both brined and smoked.⁵⁹⁵ Cod was imported salted, likely after being dried on rocks and

⁵⁸⁸ B. A. Bjarnason and M. Carlesi, *Handlining and Squid Jigging* (Rome: Food and Agriculture Organization of the United Nations, 1992).

⁵⁸⁹ Heessen, Daan, and Ellis, *Fish Atlas of the Celtic Sea, North Sea, and Baltic Sea*, p. 184-185.

⁵⁹⁰ Bjarnason and Carlesi, *Handlining and Squid Jigging*.

⁵⁹¹ Turgeon, *The Era of the Far-Distant Fisheries: Permanence and Transformation (circa 1500-1850)*, p. 65

⁵⁹² *Ibid.*, p. 65

⁵⁹³ Andrew A. Rosenberg et al., "The History of Ocean Resources: Modeling Cod Biomass Using Historical Records", *Frontiers in Ecology and the Environment* 3, no. 2 (2005).

⁵⁹⁴ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", pp. 449-450.

⁵⁹⁵ Jones and Flavin, *Bristol's Trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts*.

racks, like those at Baltimore discussed earlier. Salmon, eel, and other fish were picked in brine to preserve them.⁵⁹⁶ Records show 'wet hakes' were exported from Ireland too; these were likely fish that had been gutted and salted in the Dutch style'.⁵⁹⁷ The similarity between Irish and Dutch cures suggests that methods that were pioneered by the Dutch made their way to Ireland via English fishers who visited the coast. It is also likely that both Spanish and French fishers employed similar curing techniques in Ireland, although we have no specific records that speak to this.

The development of new curing methods in Europe in the later medieval period and the subsequent permeation of those methods to Ireland allowed fisheries to develop. Preservation was necessary for commercial fisheries; these techniques allowed Irish fish to be transported long distances and reach markets in England, Spain, or the continent. Additionally, fish processing on the shore created additional work for coastal communities and added to the fisheries economic impact.

In relation to fishing craft, most fishing in sixteenth-century Ireland was conducted close to shore in small vessels like pinnaces. Pinnaces had shallow drafts that allowed for safe operation in coastal waters, and as discussed, had a crew of four or five while fishing. They could be equipped with one or two masts as well, and often had oars too.⁵⁹⁸ We know the O'Driscolls had a fleet of 90 pinnaces at Baltimore in 1537, which could have been used for fishing and transportation in the area.⁵⁹⁹ Small craft like these could have made shorter sea voyages around the coast of Ireland, or from England to Ireland on their own. However, over longer distances, they were carried on the decks of larger ships. As mentioned earlier, this latter method was used by Spanish fishers who visited Ireland.⁶⁰⁰ Map 3.7 depicts Enniskillen Castle in 1594, in the River Erne near the castle there is an illustration of a typical single-masted pinnace with holes for oars. Figure 3.7 shows a close-up extract image of this craft, with a rowing boat beside it for a sense of scale.

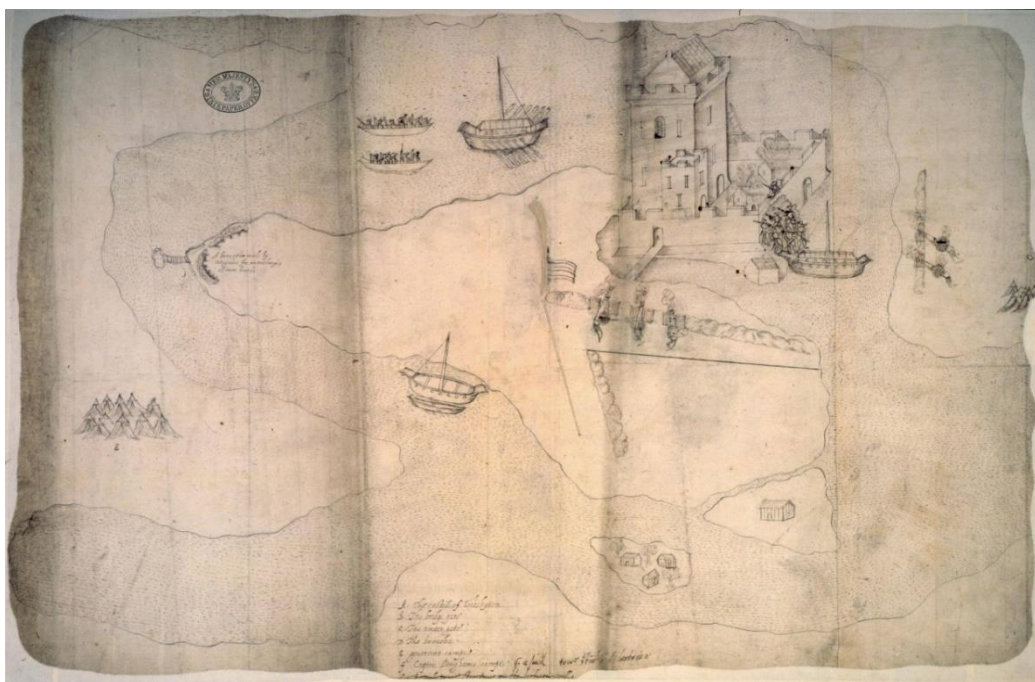
⁵⁹⁶ Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 50.

⁵⁹⁷ Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 450

⁵⁹⁸ Kenneth R. Andrews, *Trade, Plunder and Settlement : Maritime Enterprise and the Genesis of the British Empire, 1480-1630* (Cambridge: Cambridge University Press, 1984), pp. 22-23.

⁵⁹⁹ O'Donovan, *The Genealogy of Corca Laidhe*, pp. 94-95.

⁶⁰⁰ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, p. 85, no. 70, QFD ID 769.



Map 3.7 – Enniskillen, Co Fermanagh 1594.⁶⁰¹



Figure 3.7 – Extract from Enniskillen, Co Fermanagh 1594.

The deposition of Rice ap Edward, the fishing admiral in Wales, also reveals that three types of boats were commonly employed in the fishing there. We can tell the relative size of these because a different fine was imposed on each boat for breaking the rules. Edward recounts that a drover boat would pay 4d. and a skiff 6d.⁶⁰² Both of these were small craft, similar to the pinnace. Larger boats called 'barks' would pay 8d. per offence.⁶⁰³ The bark was a fully rigged

⁶⁰¹ "Plat of the fort of Enniskillen", 1594 (The National Archives, Kew: MPF 1/80).

⁶⁰² Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, p. 28, no. 145, QFD ID 14.

⁶⁰³ *Ibid.*, p. 28, no. 145, QFD ID 14.

ship with a forecastle and quarterdeck.⁶⁰⁴ While this account was from Wales, we can assume fishers used similar craft in Ireland.

There were several larger multi-sail vessels in common usage during the sixteenth century as well. The development of the carvel technique of shipbuilding, where plans were set end-to-end, allowed for the construction of larger, ocean-going vessels in the period. Some of the most common ship types to emerge from this technology were the carrack and the galleon.⁶⁰⁵ There is no shortage of contemporary illustrations of larger ships on maps from the sixteenth century. Figure 3.8 below depicts an English galleon from a map of the coast of County Antrim in 1580. This image is an English naval vessel, but galleons used for trading or fishing would have had a very similar hull and sail configuration.

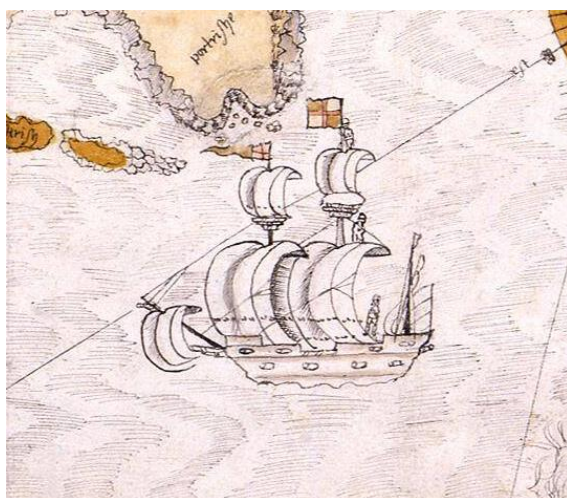


Figure 3.8 – Extract from, Coast of Co Antrim 1580.⁶⁰⁶

A map from Carlingford from 1568 (Map 3.8 over the page) shows a larger vessel sailing into the lough towing a smaller rowboat, which was likely a rescue craft, but also demonstrates that larger ships could bring smaller boats for fishing in this manner too. While this map does not depict fishing taking place, it does indicate a high level of marine traffic going into Carlingford, which, as mentioned, was one of the most prominent fishing locations in the sixteenth century.

⁶⁰⁴ A. J. F. Duffy, "The Early History of the Rye Fishing Industry", *Sussex Archaeological Collections* 107 (1969), p. 46.

⁶⁰⁵ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 197.

⁶⁰⁶ "Map of the Coast of County Antrim, Ireland", 1580 (The National Archives, Kew: MPF 1/88).



Map 3.8 – Coast of Co Down from Lough Strangford to Carlingford 1568.⁶⁰⁷

Galley ships were also widely used among coastal Gaelic Irish families.⁶⁰⁸ Individual families, such as the O'Malleys of Mayo, were renowned for their expertise in using these vessels.⁶⁰⁹ Irish galleys were in part derived from Viking longships and shared many similarities with similar vessels used in the Scottish islands.⁶¹⁰ The galleys remained in use in Ireland and Scotland due to their capability in manoeuvring around islands and the craggy coastlines of the Irish south and west coasts. There is little documentary or archaeological evidence for the use of galleys in Gaelic Ireland, but several maps and drawings from the medieval and early modern provide depictions of these ships.⁶¹¹ For example, a drawing etched in stone on the gatehouse of Dunluce Castle in Antrim depicts a galley with a single mast.⁶¹² The municipal seal of the town of Youghal (Figure 3.9) from the early sixteenth century also displays a galley, which suggests that Old English towns used these crafts as well.

⁶⁰⁷ "Map of the Coast of County Down, Ireland", 1568 (The National Archives, Kew: MPF 1/89).

⁶⁰⁸ Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland", p. 157.

⁶⁰⁹ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 197.

⁶¹⁰ Denis Rixson, *The West Highland Galley* (Edinburgh: Birling, 1998), pp. 167-168.

⁶¹¹ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 196.

⁶¹² A reconstruction of this can be seen at, *ibid.*, p. 196.



Figure 3.9 – Single masted galley on the municipal seal of Youghal, c. 1527.⁶¹³

Several galleys can also be seen in a map of Ulster from 1591 (Map 3.9 on the next page).⁶¹⁴ This map shows galleys with sails and small cabins to the rear of the ships. There are scattered references in the documentary record too. As mentioned earlier, *The Genealogy of Corca Laidhe* describes how in 1537 the 'great galley' of Waterford city joined in the attack on Baltimore and helped capture the Gaelic lord's 'chief galley of thirty oars'.⁶¹⁵ This account again indicates that Old English towns and Gaelic Irish lords used these vessels for combat. There is no evidence that galleys were directly utilized in fishing, but as mentioned earlier, they played a critical role in the maritime strength of the Gaelic Irish and were used to protect visiting fishing fleets and dissuade pirates.⁶¹⁶

The vessel types covered here are some of the most discussed in the sixteenth-century sources, but there was a great variety of other sailing craft used by fishers and merchants in the sixteenth century. Several historians have written about these vessels at length, and the details are not necessary to repeat here.⁶¹⁷

⁶¹³ John de Courcy, "A Survey of Early Irish Maritime Trade and Ships", in *The Irish Sea: Aspects of Maritime History*, ed. Michael McCaughan and John C. Appleby (Belfast: The Institute of Irish Studies, 1989), p. 20.

⁶¹⁴ This map also depicts barks for comparison.

⁶¹⁵ O'Donovan, *The Genealogy of Corca Laidhe*, pp. 94-95.

⁶¹⁶ Breen, *The Gaelic Lordship of the O'Sullivan Beare*, p. 116.

⁶¹⁷ See for example, O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, pp. 193-198 & de Courcy, "A Survey of Early Irish Maritime Trade and Ships", pp. 21-25.



Map 3.9 – A Map of the Ulster Counties, 1591.⁶¹⁸

While most fishing for white fish seems to have been done by hook and line, a more diverse range of gear and boats were used in herring fishing. As discussed, herring are relatively small (compared to hake) pelagic shoaling fish and gather in large numbers near the coast during spawning periods. This behaviour means large nets were much more effective gear to catch herring, and several types of nets were used in early modern Ireland. For example, a drift net was floated by buoys and attached to a vessel, which was commonly called a drifter.⁶¹⁹ These vessels had masts that could be lowered while the net was out so the ship could drift freely.⁶²⁰ Some of these nets could be kilometres long and would entrap whole shoals of herring that swam into them. In the sixteenth century, it was the Dutch herring fishers in the North Sea who made the best use of this technology, but it appears it was also in use in Ireland on a smaller scale.⁶²¹

⁶¹⁸ Francis Jobson, "A Map of the Ulster Counties", 1591 (Manuscripts & Archives Research Library, Trinity College Dublin: IE TCD MS 1209/17).

⁶¹⁹ D. H. Cushing, *The Provident Sea* (Cambridge: Cambridge University Press, 1988), p. 1.

⁶²⁰ *Ibid.*, p. 86.

⁶²¹ Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860*, p. 137.

In 1512, a merchant from Youghal, Patrick Walsh, ordered a 'herring-net / 120 fathoms long and 60 stitches broad'.⁶²² The net described in this account is similar to those used by the drifting vessels in the North Sea.⁶²³ Also, Map 3.10 below contains an illustration of a drifter off the coast of County Down from 1580. It can be seen with its net in the water and mast lowered in the characteristic fashion. Figure 3.10 provides a closer view of the vessel in action.



Map 3.10 – Coast of Ireland From Dublin To Carrickfergus 1580.⁶²⁴

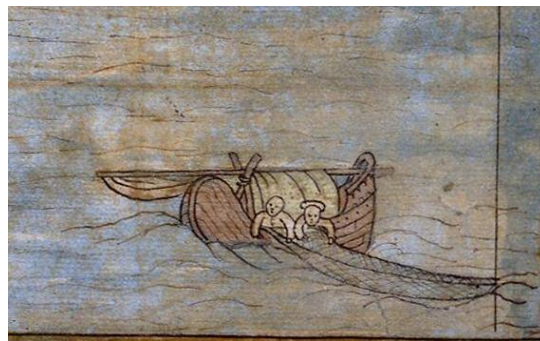


Figure 3.10 – Extract from 'Coast of Ireland, 1580'.

⁶²² Bernard, "The Maritime Intercourse Between Bordeaux and Ireland, c. 1450 - 1520", p. 16.

⁶²³ Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860*, p. 60.

⁶²⁴ "Map of the Coast of County Down, Ireland", 1580 (The National Archives, Kew: MPF 1/89).

A more standard method for catching shoaling fish like herring and pilchard in early modern Ireland was the seine net. The seine net was a long net that was dragged between two boats, the seine boat and the follower boat.⁶²⁵ The seine boat was the larger craft and had a crew of about ten; the smaller follower boat had a crew of four or five.⁶²⁶ Another crucial element was the spotter, or “huer”, who would stand in a prominent position on the coast and direct the boats towards shoals of fish. At night, the shoals of fish could sometimes be identified by the phosphorescence they caused in the water. Once fishers had located the shoal, the seine boat would be rowed as fast as possible around the fish to trap them. The net would then be enclosed and slowly tightened into a purse, making the fish easy to haul on board in baskets.⁶²⁷

Another variation of the seine was the draft net. One end of the net was anchored to the shore, while the other was latched to a boat that would be rowed around the fish. Once the fish were trapped, fishers on land would drag the whole net onshore. This method could only be used if the coastline was suitable and was commonly used to catch salmon in later centuries.⁶²⁸ These methods remained mostly unchanged from their medieval origins and were only superseded by the invention of modern trawlers.⁶²⁹

The best visual source for these methods in action comes from a map of Baltimore drawn around 1620 (Map 3.11 over the page). A close-up view of the fishing scene from the map can be seen in Figure 3.11. The left side of the image shows a net anchored close to shore while another boat rows around a shoal of fish with the other end. On the right side, two boats can be seen surrounding another shoal of fish. The mapmaker was likely not a fisher and may have misrepresented some details of the scene he saw at Baltimore, but for the most part, this map provides an accurate visual of seine nets in action.

⁶²⁵ A. E. J. Went, "Pilchards in the South of Ireland", *Journal of the Cork Historical and Archaeological Society* 51 (1946), p. 137.

⁶²⁶ Downey and Stuijts, "Historical Fisheries: Irish Pilchard Fishery and Historical Fish Harvesting and Processing Methods, Fish Products and Consumption", p. 17.

⁶²⁷ Went, "Pilchards in the South of Ireland", p. 137.

⁶²⁸ "The Pursuit of Salmon in Ireland", p. 224.

⁶²⁹ Cutting, *Fish Saving*, p. 203.



Map 3.11 – Map of Baltimore, c. 1620.⁶³⁰

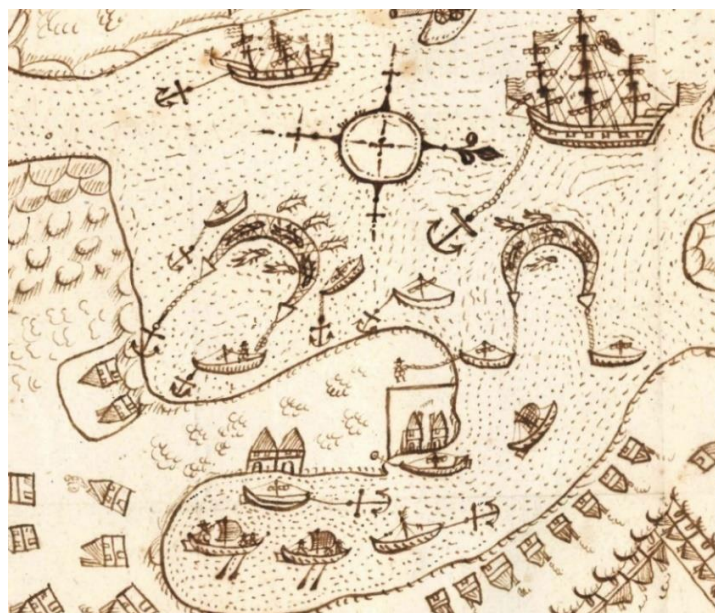


Figure 3.11 – Extract, from Map of Baltimore, c. 1620.

⁶³⁰ "Map of Baltimore, c. 1620", (Sheffield Archives: WWM/Str P/20/100). My thanks to the archivists at the Sheffield Archives for providing a digital copy of this map. They also provided these details: The map itself, which is undated and measures 38cm by 30cm, is contained within a bound volume of letters on ecclesiastical matters sent to Thomas Wentworth, 1st Earl of Strafford, which forms part of the Strafford Papers series within the Wentworth Woodhouse Muniments (WWM) collection at the Sheffield Archives.

The map was drawn around 1620 by an unknown cartographer, and by that year Baltimore was an English colony controlled by Thomas Crook.⁶³¹ The main catch at that time was pilchards, which is the fish depicted in the map.⁶³² While this is not herring, the methods used for both species would have been the same in the sixteenth and seventeenth centuries. Herring and pilchard alternated on the coast depending on the climate so fishers would use similar methods depending on which species was present in a given year.⁶³³ As mentioned, the shoaling behaviour of herring (and pilchards) made the seine net a very effective method of capture.

There is further evidence for the use of the seine net on the Munster coast in the seventeenth century. In 1616, Richard Boyle was operating a pilchard fishery at Ardmore and gave his servant money 'toward the buying of a seine to take pilchards with at Ardmore', along with further funds to pay another man 'to be our hewer there the next season'.⁶³⁴ The O'Driscoll inquisition taken in 1609 also explicitly required 'That no man ought to draw a seine in the said Harbour, nor in any part of the said country without a licence first obtained from the Lord'.⁶³⁵ This account proves that seines were in use during the Gaelic period of Baltimore, as well as in the later English settlement. It is feasible that the licences were required at Baltimore because these nets were extremely large and would have caused disruption to other shipping in the harbour.⁶³⁶

Fishers in Ireland also used cast nets to catch herring. Cast nets were a simpler net technology and were individually cast on shoaling fish by fishers from the shore or small boats. A statute from the Irish Parliament in 1470 gives us some indication of how the herring fishery operated around Dublin and how cast nets were used. The statute orders that any 'person or persons who interrupts or disturbs any of the said fishermen in throwing or drawing their nets in the light or in the dark' must pay £10.⁶³⁷ The fishers likely operated at night because herring move toward the surface of the water column at dusk and disperse over a larger area at night.⁶³⁸

⁶³¹ Michael MacCarthy-Morrogh, *The Munster Plantation : English Migration to Southern Ireland 1583-1641* (Oxford: Clarendon Press, 1986), p. 151. The following chapter will explore the rise of the English colony in more detail.

⁶³² Went, "The Irish Pilchard Fishery", p. 89.

⁶³³ A. J. Southward, G. T. Boalch, and Linda Maddock, "Fluctuations in the Herring and Pilchard Fisheries of Devon and Cornwall Linked to Change in Climate Since the 16th century", *Journal of the Marine Biological Association of the United Kingdom* 68, no. 3 (1988).

⁶³⁴ Went, "Pilchards in the South of Ireland", p. 139.

⁶³⁵ O'Driscoll Inquisition, 1609, in O'Donovan, *The Genealogy of Corca Laidhe*, p. 103.

⁶³⁶ The same methods were also used by fishers to catch mullet in Stokenham in the fourteenth century, Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 441.

⁶³⁷ Berry, *Statute Rolls of the Parliament of Ireland, First to the Twelfth Years of the Reign of King Edward IV*, 10 Edward IV., A.D. 1470, p. 667.

⁶³⁸ Henk J. L. Heessen, "ICES FishMap Species Factsheet: Herring" (ICES, 2005), p. 2.

Their movement closer to the surface would have made the herring easier to catch using a cast net.

Adding to this, in 1590 there were multiple reports from English officials of an oversupply of herring in Ireland. Several merchants wrote to officials in Dublin asking permission to export the fish they had in storage.⁶³⁹ One of these letters describes how fishers had caught upwards of 10,000 barrels of herring that year using 'cast fishing'.⁶⁴⁰ No other details are provided about the method, so it is hard to verify this claim, but given the earlier description of fisheries around Dublin, it does seem plausible these catches were made using cast nets.

There were, of course, other methods for fishing utilised in sixteenth-century Ireland, including a whole variety for river fishing. However, this section has covered the methods used most in Ireland's commercial fisheries in the sixteenth century. The evidence indicates that in Ireland, some of the most basic technologies, such as handlines, were used alongside newer technologies, like the herring drifter. In this respect, the fishing technology in Ireland was on par with other European nations. Ultimately, the types of gear and methods used by fishers were determined by local conditions, as well as the behaviour and biology of the species they targeted. As the next chapter will show, through the use of these technologies, fish became the single largest export commodity in sixteenth-century Ireland.

⁶³⁹ See Section 5.2.9 of Chapter 5 for a longer description of these letters.

⁶⁴⁰ Lord Deputy to Burghley, 26 Jan 1589-90, SP 63/150 f.40, QFD ID 1118.

Chapter 4 – The Fish Trade

*I caste to speke of Irelonde but a lytelle.
Commoditees of it I woll entitell
Hydes and fish, samon, hake and heryng*

Unknown Author, *The Libelle of Englyshe Polycye*, 1436/7.⁶⁴¹

4.1 Introduction

This chapter explores the trade of fish from Ireland spanning the fifteenth to seventeenth centuries. The first section will continue where the last chapter left off by examining what qualitative data from the QFD can reveal regarding the nature of the Irish fish trade in the sixteenth century. Following this, quantitative data from the FTD will be analysed in detail. The central focus of the analysis is on Ireland's fish trade with Great Britain during the fifteenth and sixteenth centuries. The combination of quantitative data from multiple sources will be used to illustrate the trade's fluctuation over the period. Furthermore, this data will highlight which most commercially important species and the towns most involved in the trade.

This chapter also examines the significance of the fish trade to the economy of Ireland in the fifteenth and sixteenth centuries, and the role of fish in Ireland's overall balance of trade. This chapter also examines price data from England to determine the total market value of herring exported from Ireland. Additionally, a limited price series for Irish herring in the latter half of the sixteenth century will be presented and analysed for what it can tell us about the broader health of the fishing industry at this time. Finally, this chapter will analyse island-wide export data from the early seventeenth century. Unlike earlier data, these seventeenth-century figures capture the total extent of fish exports and provide useful context from which we can compare earlier trends.

The quantitative data collection methods used in this chapter were outlined earlier in Chapter 1, Section 1.5. Additionally, the full FTD data utilised here has been printed in Appendix 3 of the online data.⁶⁴² The introduction to Appendix 3 contains an in-depth description of the data and sources used.

⁶⁴¹ Sir George Warner, ed. *The Libelle of Englyshe Polycye: A Poem on the Use of Sea-power*, 1436 (Oxford: Oxford University Press, 1926), p. 34, fol. 655.

⁶⁴² Data hosted online at, <http://hdl.handle.net/2262/96098>.

4.2 Qualitative Evidence for the Fish Trade

Before examining the quantitative data, this section will first review the qualitative records for a greater understanding of the nature of fish exports from Ireland in the sixteenth century. Documents concerning the trade of fish were found in the primary sources and added as entries to the QFD. These qualitative records provide valuable information on merchants' operations and, when aggregated, can indicate which regions merchants traded the most. Additionally, as the quantitative data discussed later focuses on England and Wales, these qualitative accounts are some of the few records that describe the internal Irish trade and the trade between Ireland and continental Europe.

Based on records in the QFD, Map 4.1 on the following page indicates with straight lines the origins and destinations of ships exporting fish from Ireland during the sixteenth century. In some cases, the sources do not list an exact origin or destination and only list the country of arrival or departure. In these cases, the lines connect to the centre of the countries in question. The map indicates that south-east Ireland experienced the highest traffic in trade and most of this trade was with ports in England and Wales. However, we can also note several voyages to Spain that originated from Cork, Limerick, Dublin, and Waterford. In total, seven recorded voyages went to England, five to France, another five to Spain and two to Wales. In contrast, no records mentioned voyages from the north coast of Ireland or heading to northern destinations like Scotland. Overall, these figures should not be interpreted as an exact representation of the balance of trade to different regions, as it is likely that we simply lack the records to accurately reflect trade to Scotland and elsewhere.



Map 4.1 – Fish Export Routes from Ireland, 1500-1603.

The end of the fifteenth century and the beginning of the sixteenth were transformative periods for trade in Ireland and across the whole North Atlantic region. The European discovery of central America in 1492 and of Newfoundland in 1497 began a new era of trade across the Atlantic.⁶⁴³ Trade increased within Europe and Ireland as well, the average size of merchant ships going to Bristol in 1400 was 88 tons, while it had increased to 150 tons by 1450.⁶⁴⁴ As

⁶⁴³ For a detailed study for why this trade boom occurred see, Kevin H O'Rourke and Jeffrey G Williamson, "After Columbus: Explaining Europe's Overseas Trade Boom, 1500–1800", *The Journal of Economic History* 62, no. 2 (2002).

⁶⁴⁴ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 109.

the Port Books and Customs accounts will attest to later in this chapter, the overall volume of trade to and from Ireland increased in this period as well. This included a greater volume of trade to Spain and other continental European ports. The data in this section illustrates that Ireland was part of the broader European trade network in the sixteenth century. And as the century progressed Ireland would become more involved in the trans-Atlantic trade, as well as developing a more complex trade network with ports closer to home.⁶⁴⁵

Returning to the trade data, in temporal terms it shows more Spanish voyages occurred toward the end of the century in the 1580s and 90s. This increase was due to warfare between England and Spain in this period, and merchants regularly sending intelligence concerning Spanish movements back to the English authorities. For example, a report from Waterford in 1587 recounts how the town had sent its 'best three ships for Bayonne' carrying frieze and hides with the plan to return with wine. Three smaller ships carrying 'dry hakes, herrings and hides' were also sent to Bilbao to 'learn some intelligences'.⁶⁴⁶ In May 1590, another Waterford merchant, Walter Sherlock, reported several Irish ships at Bilbao, including the *Maurice* and *Thomas Fitz John* of Desmond. At the same time, he recounted what he believed to be the intended movements of the Spanish fleet there.⁶⁴⁷

These qualitative records do not provide a quantitative measure of trade but do serve to highlight that, in the last few decades of the sixteenth-century trade between Irish ports and Spain continued despite the conflict. Fish was part of that trade but was not the most important commodity shipped. The data also highlights that there was a regular internal trade of fish in Ireland with most voyages travelling between the significant Old English towns. That is likely a result of the sources used, but it seems evident that overall Old English towns like Cork, Waterford and Dublin had the highest number of ships involved both in internal and international trade. The data also shows that herring was by far the most traded species with 25 voyages carrying herring domestically and internationally. Cod was the next most frequent species with seven voyages, while hake and salmon each had one.

Ultimately, the qualitative data indicates an active trade of fish from Ireland to England, Wales, France, and Spain. However, these records do not allow us to quantify that trade or estimate the volumes shipped. They are also unreliable sources for understanding the relative

⁶⁴⁵ For more on the development of a trade based on consumer goods see, Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland".

⁶⁴⁶ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 3: 1586-July-1588, no. 438, p. 438, QFD ID 1076.

⁶⁴⁷ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 4: Aug 1588-Sept 1592. (London: Longman & Co, Truebner & Co, Parker & Co, Macmillan and Co, A&C Black, A. Thom., 1885), no. Vol. XLII, 7. I, p. 339, QFD ID 1122.

importance of different regions in the fish trade. For the most part, voyages in which something went wrong were recorded more than regular, uneventful trade voyages. Therefore, there tend to be more qualitative accounts of trade during periods of conflict. To fully understand the volume and more routine aspects of the fish trade, we must investigate the quantitative sources.

4.3 The Trade to Great Britain

As explained in Chapter 1, we lack any quantitative data detailing the export of fish from sixteenth-century Ireland. Therefore, the records of Irish imports in other places are our best resource to understand the nature and size of the Irish fish trade. The current section examines trade data from England, Wales, and Scotland for what it can tell us about the trade of fish from Ireland. Most of the data used in this study are from customs accounts and port books from the fifteenth and sixteenth centuries. The central part of this study focuses on several pivotal ports and regions that traded heavily with Ireland and for which there is also data available. As outlined in Chapter 1, the assembled information was combined in the FTD to generate standardised data for analysis.

In the fifteenth and sixteenth centuries, Bristol was one the major trading ports in the south of England and had an active trade with Ireland, particularly with the south-west.⁶⁴⁸ Fortunately, Bristol's customs accounts are some of the most extensive that remain extant for England.⁶⁴⁹ In the north-west of England, Chester was the primary port, and it traded heavily with the east and south-east of Ireland.⁶⁵⁰ The analysis of the Chester trade is possible because several of the town's fifteenth and sixteenth-century customs accounts have been published.⁶⁵¹ As discussed, the fishers of the English west country often utilised Irish waters to make their catch in the sixteenth century. For this reason, data from Bridgewater will be examined for what it tells us about the trade of fish to the region.⁶⁵²

Welsh ports were some of the closest geographically to the east coast of Ireland, so the available trade data will be examined to understand if there was an active fish trade between the two regions.⁶⁵³ Lastly, the available information to understand the fish trade between Ireland

⁶⁴⁸ Longfield, *Anglo-Irish Trade in the Sixteenth Century*.

⁶⁴⁹ Childs, "Ireland's Trade with England in the Later Middle Ages", p. 12.

⁶⁵⁰ C. Armour, "The Trade of Chester and the State of the Dee Navigation, 1600-1800" (PhD diss., University of London, 1956); Donald Woodward, "The Trade of Elizabethan Chester", p. 1.

⁶⁵¹ Wilson, *Chester Customs Accounts, 1301-1566*.

⁶⁵² Duncan Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century" (PhD diss., University of Bristol, 2009).

⁶⁵³ Lewis, *The Welsh Port Books (1550-1603)*.

and Scotland will be explored. Other ports, like Southampton and London, were considered, but overall, the volume of Irish shipping to these ports was negligible compared to ports on the west coast of Great Britain.⁶⁵⁴ The data presented here encompasses the current best available quantitative information about Ireland's export trade to England, Scotland, and Wales in the sixteenth century. The data is far from a complete inventory of all exports, but by compiling and standardising data, we can examine trends in Ireland's fifteenth and sixteenth-century fish exports in far greater detail than was previously possible.

4.3.1 Bristol

As discussed in Chapter 1, the sixteenth century Bristol data comes from the *Bristol's trade with Ireland and the Continent* project. The project team, which included Susan Flavin and Evan Jones, worked to computerise 11 of the extant 'particular' accounts and Port Books for Bristol running from September to September for each of the following years: 1503/4, 1516/17, 1525/6, 1541/2, 1545/6, 1550/1, 1563/4, 1575/6, 1594/5 and 1600/1601.⁶⁵⁵ For comparison, the available fifteenth-century data has also been included in this analysis. Margaret M. Condon and Evan Jones have fully transcribed the published these fifteenth-century accounts on the University of Bristol's Research Data Repository.⁶⁵⁶ This data comprises 14 'particular' accounts which all cover varying periods from 1461 up to 1483.⁶⁵⁷ The distributed nature of the months covered by this fifteenth-century data makes it far less reliable than the sixteenth-century accounts, which all cover the same period (Sept to Sept). As we shall see, the importation of fish was highly seasonal, so unfortunately many of these early accounts miss the crucial season for fish imports. Wendy Childs has also published summarised data for several more Bristol accounts covering the years: 1404/5, 1479/80, 1485/6, 1486/7 and 1492/3.⁶⁵⁸ These accounts cover whole accounting years but contain only summarised values; they show the overall picture trade each year, but do not provide the same level of detail as the other accounts.

⁶⁵⁴ Childs, "Ireland's Trade with England in the Later Middle Ages", p. 31.

⁶⁵⁵ Accounts in this period used the Christian festival of Michaelmas in September to divide accounts.

⁶⁵⁶ All the accounts can be found at this page, Condon and Jones, *Bristol 'particular' customs account transcriptions*. A full list of the accounts used in this research can be found in the bibliography and FTD.

⁶⁵⁷ Jones has also published tonnage estimates for several other late fifteenth century accounts, Jones, "Tonnage estimates of goods recorded in the Bristol 'particular' customs accounts: 1465/6, 1485/6, 1503/4."

⁶⁵⁸ Childs, "Ireland's Trade with England in the Later Middle Ages".

Combined these sources can tell us which species of fish were exported most from Ireland during the fifteenth and sixteenth centuries. The simplest to measure the relative importance of species is to compare the total value of their exports. The customs accounts and port books do not contain market values, but instead, list fixed 'nominal values' set by a centrally controlled book of rates.⁶⁵⁹ The rates charged for fish did not change over the fifteenth century. However, in 1558, the duties for most commodities roughly doubled to align with rising market prices.⁶⁶⁰ To adjust for this inflation, customs values after 1558 were pegged to pre-1558 levels to provide comparable figures across all records in this study.⁶⁶¹ A footnote denotes instances where this reduction has been applied.

The first extant Bristol customs account is from 1404/5. This account is not as detailed as the later records, but figures published by Wendy Childs show that the total value of Irish trade in that year was £2,091 and, of that, £1,754 was fish with herring accounting for just over half.⁶⁶² While these figures do not provide much detail, they do show that fish was a large portion of the overall trade between Ireland and Bristol and very economically significant at this early point. Following this, there is a long gap in records until 1461 when accounts capturing all international trade became available again.⁶⁶³

Table 4.1 shows the values of different species of fish in all the available accounts running from 1461 to 1500. Most currency values, other than those quoted from the sources, are listed in modern pounds in this chapter, with a pound containing 240 pence.⁶⁶⁴ As can be seen, white herring (salted herring), was the most valuable species, followed closely by salmon, and hake in third. We can also observe red herring on this list; it was not a separate species, but rather herring cured with salt and then smoked, giving it a distinctive red colour and thus its name.⁶⁶⁵ Charles L. Cutting describes the process of making red herring in nineteenth-century Yarmouth. He claims this process had not recognisably changed since the early modern period. The herring were first washed and then put in salt for 14 days, after which they were put on spits

⁶⁵⁹ Hunter and Scott, *The Ulster Port Books, 1612-15*, p. xii.

⁶⁶⁰ Flavin, *Consumption and Culture in Sixteenth-Century Ireland: Saffron, Stockings and Silk*, pp. 13-14.

⁶⁶¹ This was done by taking the custom rate charged for each individual unit of fish before 1558 and applying that rate after 1558. In a few cases there were no matching units and in these cases the total was reduced by half, which was the method used by Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", p. 11.

⁶⁶² Childs, "Ireland's Trade with England in the Later Middle Ages", p. 15.

⁶⁶³ See *ibid.*, p. 15. for more. What little data is available does still contain scattered references to the Irish fish trade in this period.

⁶⁶⁴ As mentioned, the modern pound figures are calculated by converting everything to pence and dividing by 240.

⁶⁶⁵ Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", pp. 43-44.

and smoked for a further 14 days in large smoking houses.⁶⁶⁶ The fourth most valuable fish is a product marked generically as 'salted fish'. There is no way to know for certain what species this refers to, but based on its value, it was probably lower quality fish and likely included species like whiting, ling, and inferior quality hake.⁶⁶⁷

Fish Product	Nominal Value (£)
Herring White	2978.49
Salmon	2479.63
Hake	2143.08
Salted Fish	778.55
Herring Red	465.55
Pollock ⁶⁶⁸	50.10
Eels	34.75

Table 4.1 – Nominal value of fish imported to Bristol from Ireland, 1461-1493.⁶⁶⁹

Figure 4.1 shows the balance of imports between species over the fifteenth-century accounts. The graph sets out the five most popular fish products, with all other products grouped.⁶⁷⁰ As can be seen, imports in the last four years far outweigh exports in any previous years. However, we must remember that the earlier accounts are mostly fragments of full years, so a lot of the information is missing from them. Exports peaked in 1479/80 at £2,843, which was the highest total nominal value out of any year in both the fifteenth and sixteenth centuries. This was helped by a substantial import of salmon in 1479/80, a fish that demanded a high customs value. There were also strong imports in the 1465/6 accounts, which cover a more extended period than most other accounts before 1479/80.

⁶⁶⁶ Cutting, *Fish Saving*, p. 76.

⁶⁶⁷ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 49.

⁶⁶⁸ Pollock, or Pollack (*Pollachius pollachius*), see "Species Dashboard, Pollack (*Pollachius pollachius*).", (Marine Institute of Ireland, 2020) <https://shiny.marine.ie/speciesdash/>.

⁶⁶⁹ Several other fish and marine mammals were also found in the accounts in small amounts, these included, 'Harburdan', cod, whiting, seals, 'Scroff', dogfish and porpoise.

⁶⁷⁰ Overall, the 'other' category accounts for a tiny amount of the total in both the fifteenth and sixteenth century data.

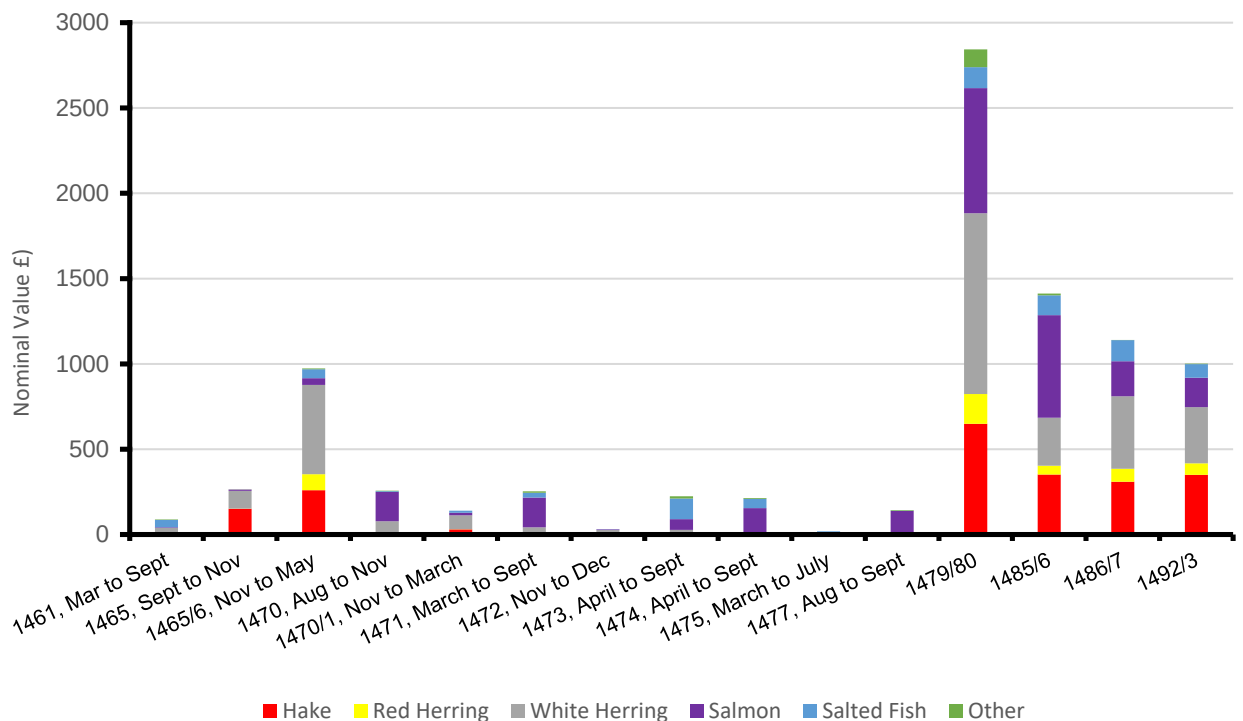


Figure 4.1 – Nominal Value of fish imports to Bristol from Ireland per year, 1461-1477.⁶⁷¹

Moving on to the sixteenth-century data, Table 4.2 on the next page shows the six most valuable species and cures imported in the 11 available accounts from 1503 to 1601. Like the earlier data, white herring was the most valuable import, followed by hake and then salmon. However, this relationship did change year on year, with hake being the most valuable import in the 1516/17 accounts. After salted fish and red herring, eel is the next most costly species, followed by a fish called ‘cole’, which was probably *Salvelinus colii*, a freshwater fish that exclusively inhabits Irish lakes.⁶⁷² In comparison to the fifteenth-century data, herring and hake imports are higher in the sixteenth. However, salmon and salt fish imports were higher in the fifteenth century overall.

⁶⁷¹ There were small shipments of herring in January 1483 as well, but the account is incomplete and does not list an origin for the fish, so it was not included in the totals, M. Condon and Evan Jones, eds., *Bristol 1483, January: Particulars of Account of John Walshe, Controller* (Bristol: University of Bristol, Research Data Repository, 2019), <http://www.bristol.ac.uk/history/research/cabot/publications/>.

⁶⁷² "Salvelinus colii (Günther, 1863)." (Fishbase.org, 2020) <https://www.fishbase.in/summary/49332>.

Fish Product	Nominal Value (£)
Herring White	5091.07
Hake	2834.36
Salmon	1806.80
Salted Fish	507.19
Herring Red	291.98
Eel	46.25
Cole	12.5

Table 4.2 – Nominal value of fish imported to Bristol from Ireland, 1503-1601.⁶⁷³

Figure 4.2 over the page, shows the balance of imports from in the sixteenth century. While the sixteenth-century data only shows figures up to 1595, there is one further account for 1600/1 that is complete but simply shows no fish imports from Ireland in that year. In the sixteenth century, imports were most robust in the first three accounts from 1503 to 1526. After that point, they began to decline sharply. For most years, herring are the most valuable, but this shifts in 1516/17, when there was a decline in herring and an all-time high import of hake. Salmon imports remain more consistent compared to herring and hake, but do still experience fluctuations, especially after 1541/2. A statute enacted in 1515 may explain some of the drop apparent from 1541 onwards. This statute stated, 'that whereas merchants convey out of this land into France, Britain, and other strange parts, salmons, herrings, dry lings, hakes and other fish, so abundantly that they leave none within the land to vitall the King's subjects', it suggested that each merchant 'leave within the land the third part of his fish'.⁶⁷⁴ Parliament first enacted the statute in 1515, but there was no dramatic drop in imports until 1541, so perhaps the rule was not enforced effectively until after 1525/6.

⁶⁷³ There were small amounts of the following species also found in the sixteenth century accounts, sturgeon (*Acipenser sturio*), seals, pollock, sardines (*Sardina pilchardus*), haddock, gurnard, mackerel, sprat (likely, *Sprattus sprattus*), and whiting. For more on these species see, "FishBase", www.fishbase.org, version (12/2019). Post-1558 customs values have been pegged to pre-1558 rates.

⁶⁷⁴ Cited in, Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 42.

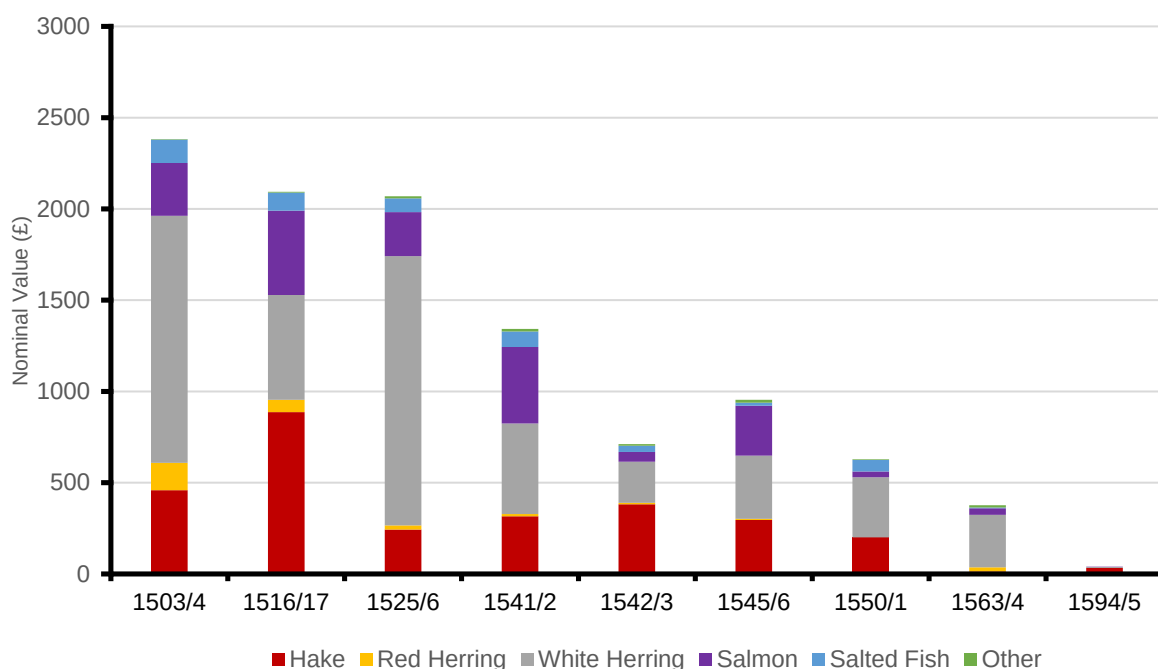


Figure 4.2 – Nominal value of fish imports to Bristol from Ireland per year, 1503-1595.⁶⁷⁵

The main issue with the sixteenth-century data is the tax status of fish over the period. A law passed by the English Parliament in 1563 made the import of fish by English vessels and the export of fish exempt from customs duties.⁶⁷⁶ A letter written by Sir Francis Walsingham in 1588 indicates that Parliament extended the exemption to include fish from Ireland. In 1591 the rules changed again, and some fish from Ireland were once again recorded and subject to customs.⁶⁷⁷ Because of these laws, the accounts only haphazardly register any fish from Ireland between 1564 and 1591.⁶⁷⁸

After Parliament amended the law in 1591, small amounts of fish, mostly hake, are recorded arriving from Ireland again. However, a customs exemption was still widely applied that excluded fish personally caught by the merchant who brought it to port. A clerk in Gloucester estimated that, in his port, only one-third of the fish imported from Ireland was liable to duty after 1591.⁶⁷⁹ The 1600 to 1601 account for Bristol contains no fish for Ireland at all. However, even if imports in 1594/5 were two-thirds higher, the amount would still be far lower than imports in the last year for which we have reliable information (1563/4). That would suggest the export

⁶⁷⁵ Post-1558 customs values have been pegged to pre-1558 rates.

⁶⁷⁶ Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", p. 190.

⁶⁷⁷ Walsingham to the Lord Treasurer re export of fish, SP 46/35 f.120 cited in, Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", p. 29.

⁶⁷⁸ In certain accounts some fish is still recorded but it is not clear why some shipments were recorded in customs accounts when it was not legally required.

⁶⁷⁹ Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", p. 29.

of fish from Ireland suffered a crash by the end of the sixteenth century. Other factors support this hypothesis. For example, in 1581, the English Parliament passed a law banning the import of herring from Ireland to protect the English fishing industry.⁶⁸⁰ This act would have inflicted even further damage to the Irish fish trade. That said, a small number of herring did arrive from Ireland in 1594, so it is possible that customs officials did not enforce the law entirely, or perhaps it was such a small amount (only two barrels & three hogsheads) that its entry was permitted.

External factors also supported the idea that the export of fish virtually ceased by the end of the century. During the Nine Years War, from 1593 to 1603, there were widespread food shortages and confiscation of fish by the English authorities for the army.⁶⁸¹ The war caused significant disruption to fishers, and the next chapter will explore how and why this happened in detail. Given this, it would not be surprising to find exports did decline sharply in the period as the data would seem to show. Changes in the law over the century exaggerate and mask the decline of Irish imports; while the real decline was not as dramatic as the data would suggest, it seems evident that a decline did occur.

It is possible that other factors, such as large-scale customs evasion and smuggling, also contributed to the apparent decline of fish imports from Ireland. As mentioned, Evan Jones has shown that the smuggling of restricted commodities, such as leather and grain, was widespread in Bristol in the sixteenth century.⁶⁸² However, no evidence suggests merchants smuggled fish to any great extent. The customs on fish in the early decade were not excessive, so there was little incentive to smuggle it.⁶⁸³ Furthermore, between 1563 and 1591, fish was exempt from customs, so there was no need to hide the trade during this period.

The most valuable fish product imported to Bristol from outside Ireland was fish from Newfoundland, which was almost always cod. The imports of the Newfoundland fish in part help explain the decline of Irish imports. Newfoundland fish was always exempt from customs duties, but the customs officials did record some shipments, even if they did not charge any customs on them.⁶⁸⁴ The data shows that around the time Irish imports first began to decline in 1541/2, Newfoundland imports were peaking with £414 worth imported that year. Later in 1600/1, when no Irish imports were recorded at all, Newfoundland imports totalled £240. Due

⁶⁸⁰ Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", p. 190.

⁶⁸¹ See Chapter 6, Section 6.2.2 for more on this.

⁶⁸² Jones, "Illicit business: Accounting for Smuggling in Mid-Sixteenth-Century Bristol".

⁶⁸³ Jones and Flavin, *Bristol's Trade with Ireland and the Continent, 1503-1601 : the Evidence of the Exchequer Customs Accounts*, p. xiii.

⁶⁸⁴ Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", p. 29.

to the administrative issues, the accurate scale of the Newfoundland imports was never documented; what remains is only fragments of the total trade. However, even these limited shipments illustrate that from the 1540s onwards Newfoundland fish began, in part, to replace Irish fish in the Bristol imports.

The customs value of fish imports to Ireland from in the sixteenth century only amounted to £68.5. The first imports occurred in 1594/5 when a small amount of hake and herring was exported to Ireland. Although the amounts were small, this still suggests there was a dearth in Ireland at the time. In 1600/1, a ship carried a full load of Newfoundland fish to Ireland from Bristol. This shipment further illustrates that not only was Newfoundland fish taking market share from Irish fish but was replacing domestically caught fish too.

So, the available data suggests that the export of fish from Ireland reached its highest levels in the late fifteenth and earlier sixteenth centuries. However, customs values only allow us to compare the relative importance of goods but do not speak to the total weight of fish exported. To address this, the most important species in the accounts were converted to TLW to provide accurate figures on the weight of fish exports. Live weight figures far more accurately reflect the amount of fish extracted from the sea and allow us to assess better the potential impact of these extractions on marine ecosystems. While we need to modify the nominal values figures to account for rate changes, the same is not necessary for the TLW figures because they are based on the volume of fish transported. The methods used to achieve this were explained in Section 1.5 of Chapter 1.

The main complication in calculating TLW is the wide variety of arcane units of measurement that were used in early modern ports. Each of these units was converted to a modern equivalent in kilograms. Considerable research went into finding the most accurate and reliable conversions for each unit used within the accounts. Additionally, each cure of fish, such as white and red herring, had separate units but were combined to give a total for each species. For these reasons, the calculations were only done for the three most important species that dominate imports: herring, hake, and salmon.⁶⁸⁵ The full list of these conversions and the sources used to find them are listed in the introduction to Appendix 3 of the online data.⁶⁸⁶

The nominal values figures showed that herring was the most important import to Bristol from Ireland in the fifteenth and sixteenth-century accounts, and Figure 4.3 shows the TLW of herring imported to Bristol from Ireland from 1461 to 1595.⁶⁸⁷ In total, 1925 TLW was imported during

⁶⁸⁵ Salted fish was also impossible to accurately convert because it is not a single identifiable species.

⁶⁸⁶ Data hosted online at, <http://hdl.handle.net/2262/96098>.

⁶⁸⁷ Again, there was one further account in 1600/1 with no fish imports from Ireland recorded.

the fifteenth century and a further 3337.9 TLW in the sixteenth.⁶⁸⁸ Overall, herring imports exhibit substantial variation; they peak first in 1479/80 before declining and rising again at the beginning of the sixteenth century. Imports reached their highest level in 1525/6 before then dropping dramatically and remaining low for the remainder of the century.

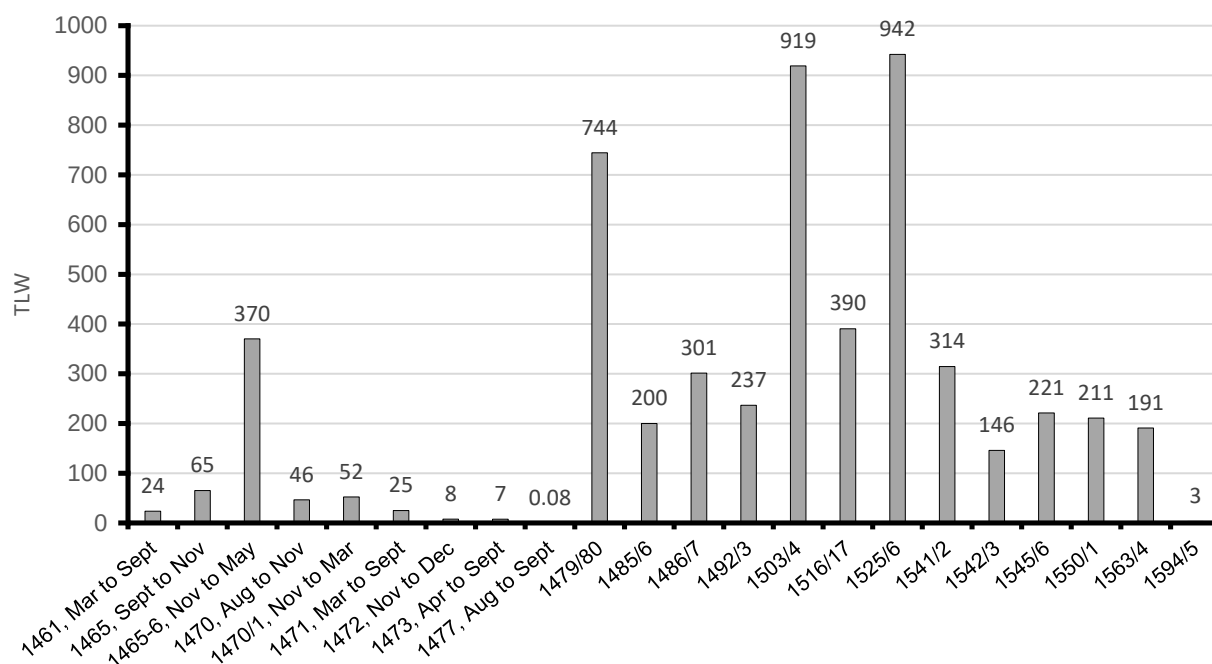


Figure 4.3 – TLW of herring imported to Bristol from Ireland, 1461-1595.

Not all the accounts are useful for examining the seasonality of imports. In the fifteenth century, only the accounts from 1461-1477 contain monthly details. These show that, on average, the most significant imports took place in February, at about 300 TLW imported that month, with October the next most frequent at only 64 TLW. On the other hand, all the sixteenth-century accounts contain monthly figures. Figure 4.4 shows the monthly trend for the sixteenth-century herring imports. This graph shows a similar pattern to the fifteenth century, with no, or very few imports during the summer months. However, the sixteenth-century data differs in that it indicates a more significant spike in the autumn. The trend year on year does vary slightly across the century, but in most cases, the peak of imports occurs in December and January.

⁶⁸⁸ The TLW figures for the last four accounts provided by Wendy Childs in the fifteenth century were calculated by taking the value of each species and dividing it by the value of the most common unit used for that species. For example, in 1479/80 there was £1059.55 worth of herring imported, the most common unit for herring was the barrel, which was worth £0.25 in customs. So, 1059.55 divided by 0.25 means there were 4251.86 barrels imported. The TLW figure for a barrel is 157.82 kg. To reach a total TLW figure we multiply 4251.86 by 157.82 and then divide by 1,000 to reach 671 TLW.

This pattern may be due to ships wishing to exploit the Lenten market, which usually began in February.⁶⁸⁹

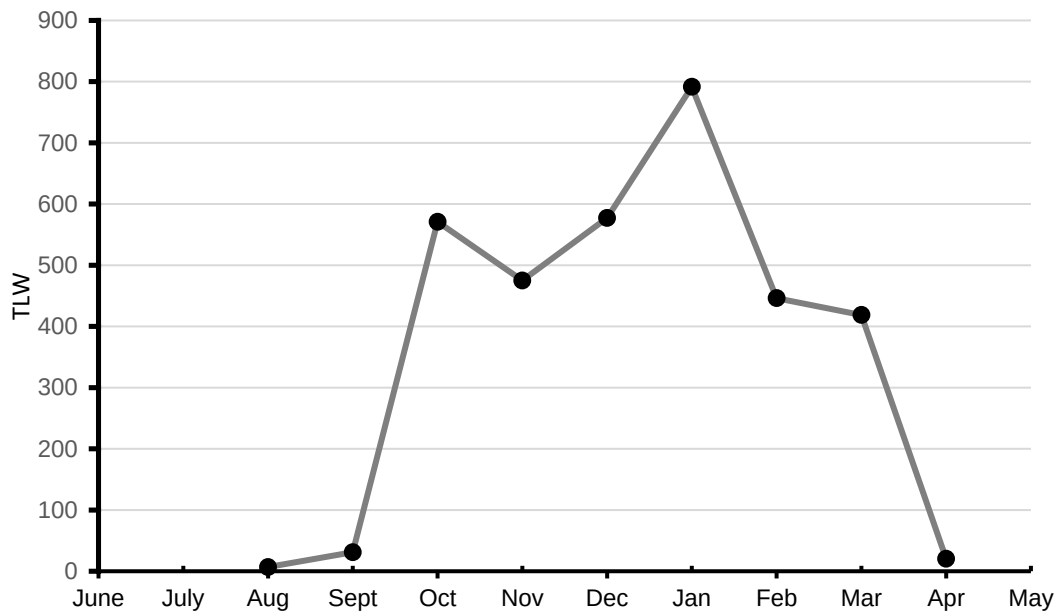


Figure 4.4 – Herring imports to Bristol from Ireland per month, 1503-1595.

The spawning season of herring, which occurs during autumn and winter on different parts of the coast, also influenced the timing of imports. As mentioned, imports spiked in January / December and based on modern observations, the most prominent spawning populations during these months are found around Waterford.⁶⁹⁰ However, spawning takes place in different areas of south-east Ireland from October to March, so the pattern here would suggest that merchants imported herring from a variety of locations in Ireland. That said, fishers could also preserve their catch to ready it for importation at a later time. For that reason, we cannot assume in every case that the import timing of fish relates directly to its spawning period.

As mentioned earlier, the two most popular preservation methods for herring in the sixteenth century was salting and smoking. The type of cure used would depend on the fat content of the herring caught. Fattier herring were generally salted and barrelled, while the less fatty herring were smoked to mask the poor taste.⁶⁹¹ Furthermore, it took considerably longer to process red herring than white. Herring were at their largest just before spawning, so we should expect to see white herring imported in the middle of the season and more red herring toward the end,

⁶⁸⁹ Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland", p. 190.

⁶⁹⁰ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds", p. 27.

⁶⁹¹ James Travis Jenkins, *The Herring and the Herring Fisheries* (London: P. S. King, 1927), p. 54.

as the fish lost weight.⁶⁹² This is precisely the pattern apparent in Figure 4.5 below, with red herring emerging stronger later in the season.

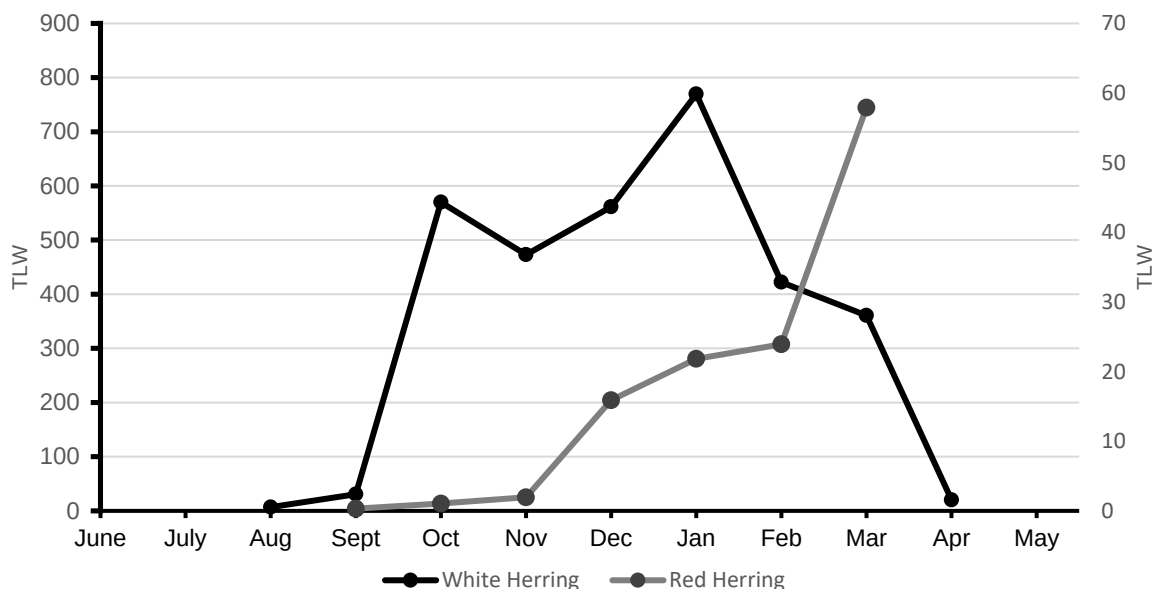


Figure 4.5 – Comparison of white and red herring imports, 1503-1695.⁶⁹³

Regarding spatial data, the Bristol records do list origins of ships, but in most cases, these are simply recorded as 'Ireland', with no specific last port of call logged. However, the records do list a home port for almost every ship. Based on these home ports, the data shows that, in the fifteenth century, 41 per cent of the fish carried to Bristol was done so by Irish vessels, 40 per cent by English, and 12 per cent by Portuguese. The Portuguese involvement is unique to the Bristol accounts, no other reference was found for this study to suggest the Portuguese were involved in trading fish between Ireland and England in the early modern period.⁶⁹⁴ Conversely, the sixteenth-century accounts showed that 27 per cent of the fish was carried by Irish vessels, followed by English at 53 per cent and Welsh at 19. However, the share of the trade did fluctuate year by year. For example, in 1550/1, 86 per cent of the herring was carried by English boats, while in 1563/4, 86 per cent by Irish. It is not clear from the accounts alone why there was so much variation occurring year by year.

⁶⁹² Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 43.

⁶⁹³ Red herring is placed on a separate axis here as the total volume of red herring is far lower than white.

⁶⁹⁴ For more information on the scarcity of Portuguese material see, Spanish and Basque Newfoundland Cod Fishery 1500-1790 Supporting Documentation, p. 4, which is part of a wider dataset, Poul Holm et al., "Accelerated Extraction of North Atlantic Cod and Herring 1520-1790 [Data Set]" (Dublin, 2021).

Boats with home ports outside Ireland reveal nothing about the ports from which the fish originated, but Irish homeports can inform us about the towns most involved in the trade. Just because a ship has a particular home port does not guarantee the cargo originated there, but given the lack of other information, the home ports are our best indication of where the fish originated. In the fifteenth century, Waterford and Cork were by far the most dominant exporters of herring. Figure 4.6 below shows the comparative breakdown of home ports for the sixteenth century. There were a higher number of towns involved overall in the sixteenth-century trade, but Waterford and Cork remained the most prominent. Wexford was the next most frequent, followed by Kinsale, Dublin and New Ross. Unsurprisingly, ports on the south-east coast that were geographically closest to Bristol dominated the trade. Many of these ports are also near herring spawning grounds, which means catches were probably also taken near the ports. We lack other evidence for the scale of fishing in Waterford in the fifteenth or sixteenth centuries, so these figures are our best indication that the town was one of the largest fishing ports in Ireland in the early modern period.

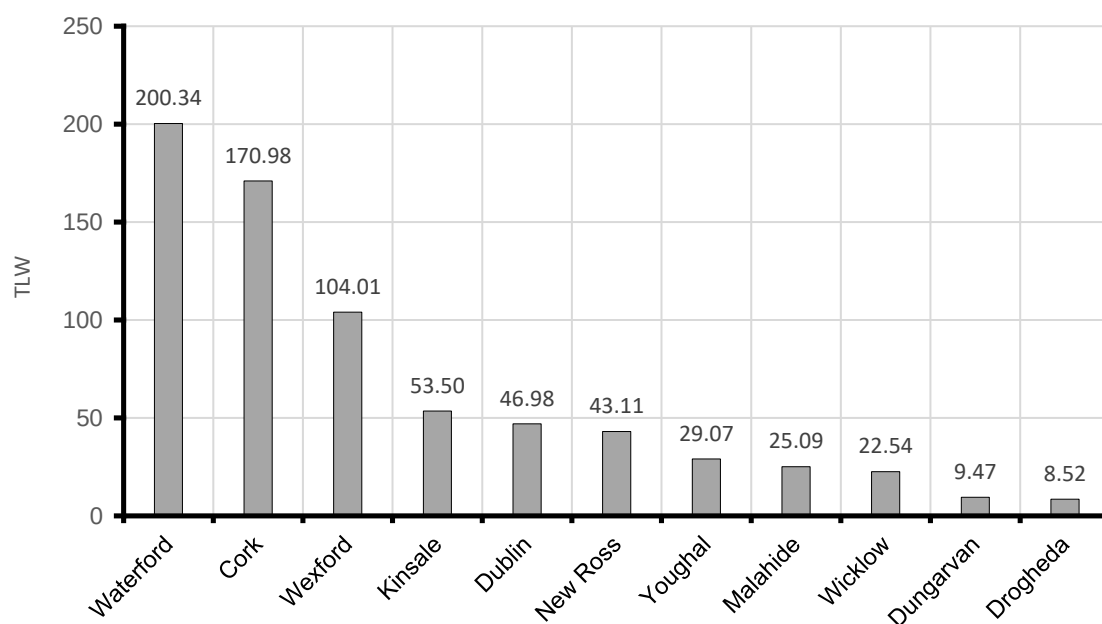


Figure 4.6 – Import of Herring to Bristol by Irish Home Ports, 1503-1595.⁶⁹⁵

Hake was the second most imported fish into Bristol after herring and, as the previous section highlighted, it was one of the most sought-after fish by distant water and domestic fishers in Ireland. The live weight conversion method for hake was already explained in Chapter 1,

⁶⁹⁵ The towns of Waterford and Pilltown were combined in this total because Pilltown is so close to Waterford and the ships would have likely traded from Waterford.

Section 1.4. Merchants would often count hake as individual fish or group them into a longer hundred (120 fish).⁶⁹⁶

Figure 4.7 below shows the TLW of hake that was imported to Bristol from Ireland over the fifteenth and sixteenth centuries. In the fifteenth century, the most significant import took place in 1479/80 and reached a peak in the next century in 1516/17. In that year, hake accounted for a larger import than any other species of fish. However, in 1525/6, imports declined sharply from their peak and only experienced a modest rebound before records ceased after 1563. When records return in 1594/5, imports are only a fraction of what they were in previous decades. The data suggests that hake imports declined sooner in the sixteenth century compared to herring, and this may be related to the qualities of hake itself. Hake was a white fish comparable in taste and appearance to cod. For this reason, hake's decline may have been associated more with the rise of the Newfoundland cod fisheries and the increase of cod imports from Newfoundland to England in the middle of the sixteenth century. As discussed earlier, the Newfoundland fishery also drew fishers away from European fisheries. So, the promise of abundant catches in the New World may have drawn fishers away from the Irish hake fishery, reduced the number of boats catching fish in Ireland, and consequently impacted supply.

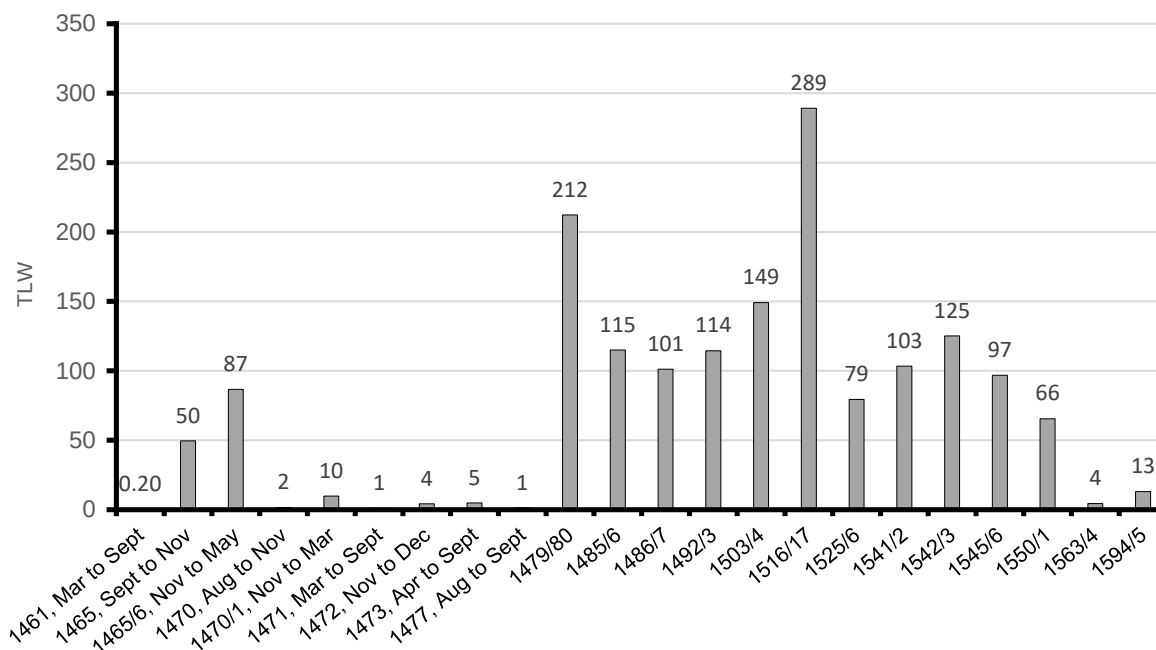


Figure 4.7 – TLW of hake imported to Bristol from Ireland, 1461-1595.

⁶⁹⁶ As discussed, the live weight of a long hundred is reached by multiplying the weight of one hake (1.36kg) by 120. Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 48; Hake Live Weight Data, from "Species Dashboard, Hake (*Merluccius merluccius*)", <https://shiny.marine.ie/speciesdash/>.

In the fifteenth century, hake imports took place mostly between October to February, with the most significant importation happening in the latter month. In contrast, Figure 4.8 below shows the monthly import of hake in the sixteenth century. The trend here is not entirely different from the fifteenth century, with similarly high levels of imports in February. However, in contrast, the sixteenth-century data shows hake imports to be more concentrated in the first three months of the year.

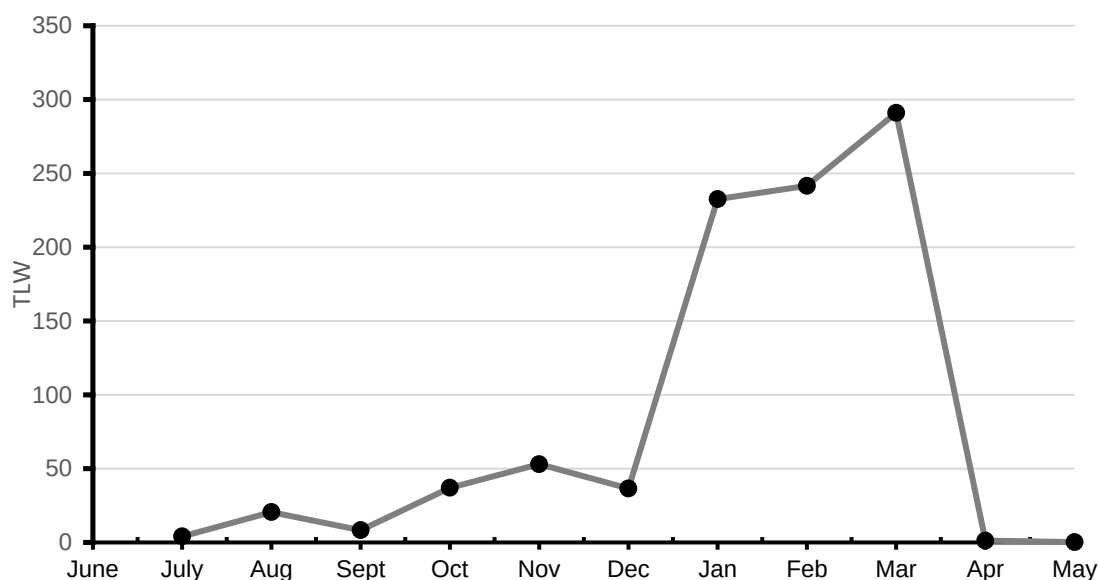


Figure 4.8 – Hake imports to Bristol from Ireland per month, 1503-1595.

This peak in the winter months seems contrary to the pattern of hake fisheries discussed earlier, which placed the English, French, and Spanish hake fisheries in Ireland firmly within the summer months. The summer is when hake spawning off the Irish coast is at its peak, so this makes sense.⁶⁹⁷ In contrast to this, the import figures from Bristol suggest the hake fishery was a winter activity. Hake caught in the summer may have been kept in storage until the winter. However, there is no evidence to indicate this was a widespread practice, and it would have been logistically challenging for fishers and merchants. It is also possible that the hake recorded here was caught elsewhere, such as the Bay of Biscay, before being landed in Ireland. The peak spawning period for the Bay of Biscay happens from January to March, which matches the peak of imports closely.⁶⁹⁸ However, again, there is no indication that this was a common practice among fishers on the Irish coast. This pattern of imports might also suggest that there were two hake seasons: one for the foreign fishers in summer and another for domestic fishers

⁶⁹⁷ Alvarez et al., "Distribution and Abundance of European Hake *Merluccius merluccius* (L.), Eggs and Larvae in the North East Atlantic Waters in 1995 and 1998 in Relation to Hydrographic Conditions", p. 819.

⁶⁹⁸ Korta et al., "European Hake (*Merluccius merluccius*) in the Northeast Atlantic Ocean", p. 8.

in the winter. Given the lack of contemporary sources discussing the hake fishery, we can only speculate.

In the fifteenth century, 38 per cent of hake was carried by Irish vessels, compared to 53 per cent English over the same period. Over the whole sixteenth century, a much higher portion of the fish - 63 per cent - was taken by Irish vessels, compared to only 19 per cent by English. Once again, this does not mean that Irish fishers caught 63 per cent of the hake, but it does show that the sixteenth-century hake fishery had a greater involvement of Irish vessels compared to the herring trade. In the fifteenth century, only five ports were involved in the hake trade, with Kinsale being the most frequent exporter, followed by Cork, Youghal, Waterford and Ballyhack.

Figure 4.9 below shows the most frequent home ports for the sixteenth century. In this case, ports on the south-east coast, such as Youghal, Kinsale and Dungarvan, showed the highest involvement in the trade. This is what we would expect given the behaviour patterns of hake, as the principal hake nursery grounds covering the south-east and western coasts and modern observations have shown that hake are concentrated in this area.⁶⁹⁹

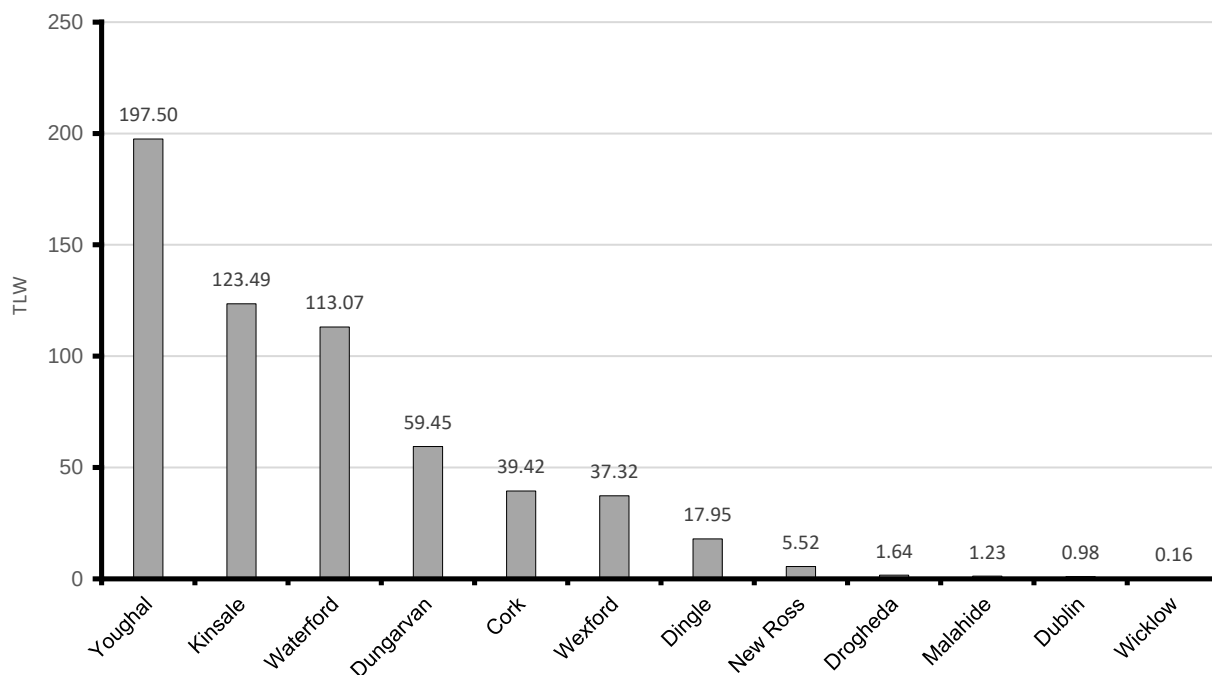


Figure 4.9 – Import of Hake to Bristol by Irish Home Ports, 1503-1595.

⁶⁹⁹ Hake Nursery Grounds from, "Ireland's Marine Atlas", <http://atlas.marine.ie/#?c=53.9108:-15.9082:6>; "Irish Groundfish Survey (IGFS)." (Irish Marine Institute, 2020) <https://shiny.marine.ie/igfs/>.

Salmon was the second-most valuable fish imported to Bristol from Ireland in the fifteenth century and the third in the sixteenth century. Across all the accounts, it was by far the most valuable fish caught in freshwater, assuming the majority was captured in weirs and not in the open sea, which seems to have been the case.⁷⁰⁰ The conversions used to convert salmon to TLW were derived mostly from the reported volume of a pipe - which was the most common unit for salmon - said to be 84 gallons in volume.⁷⁰¹

Figure 4.10 below shows the TLW of salmon imported across all the Bristol accounts. The data shows that salmon imports peaked in the fifteenth century and would not reach the same levels in the sixteenth century. Salmon imports crashed dramatically in 1542/3 before recovering partially in 1545/6 and then declining again in 1550/1. Notably, the crash in salmon occurred before the change of law in 1563, so it is not related to administrative issues. When the customs accounts record fish again in 1594/5, only a minuscule amount of salmon was reported. This earlier decline of salmon compared to marine species such as herring may be related to environmental degradation and pollution. The documentary records tell us that excessive building river infrastructure and pollution from industry and agriculture was of concern to people in the sixteenth century, and this could have negatively impacted salmon stocks. These potential environmental factors will be discussed further in Chapter 6.

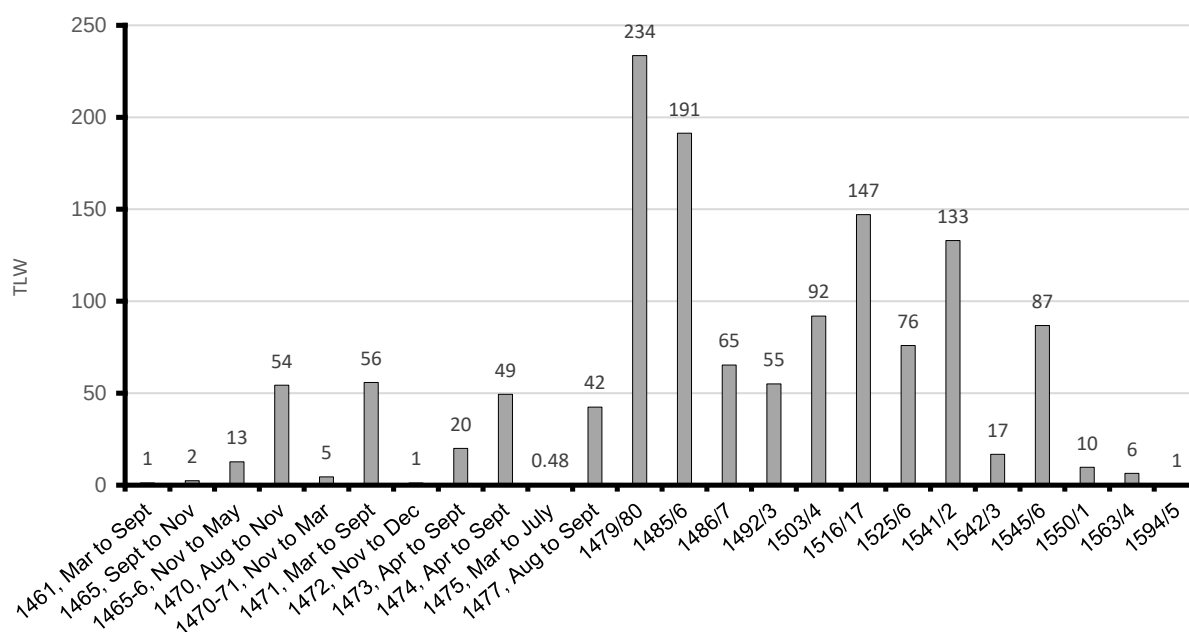


Figure 4.10 – TLW of salmon imported to Bristol from Ireland, 1461-1595.

⁷⁰⁰ Went, "The Pursuit of Salmon in Ireland".

⁷⁰¹ Jones, "Tonnage Estimates of Goods Recorded in the Bristol 'Particular' Customs Accounts: 1465/6, 1485/6, 1503/4.", p. 15.

Over the fifteenth century, salmon was exported from Ireland from February to November, with a significant spike being recorded in August. Spawning of salmon in Ireland takes place in different rivers from around January to August each year. During this period, salmon return to the river in which they were born to spawn and give rise to the next generation.⁷⁰² Salmon that have spent two or more years at sea tend to return earlier in the season in the spring. These salmon tend to be larger, so anglers prefer them over other fish. Those that return to their home river later in the year are generally coming back after just one year at sea.⁷⁰³ The high concentration of salmon in August in these accounts would suggest most of the salmon caught in this period were returning after a single year at sea.

Figure 4.11 below shows the monthly trend for the sixteenth-century data. These accounts show a different picture, with imports peaking in March and then declining again before picking up in the summer months. It is possible that the peak in March was related to the influx of fish for Lent but might also indicate fishers caught a higher number of salmon that spawned in their second year of life. However, the trend does change year on year; for example, in 1541/2, there is a robust import in August and September, while in 1516/17, there was a massive import in March. That single month drives much of the trend seen in the graph below. Overall, compared to herring and hake, salmon imports were spread more evenly throughout the whole year. This pattern makes sense in light of salmon's lengthy spawning season.

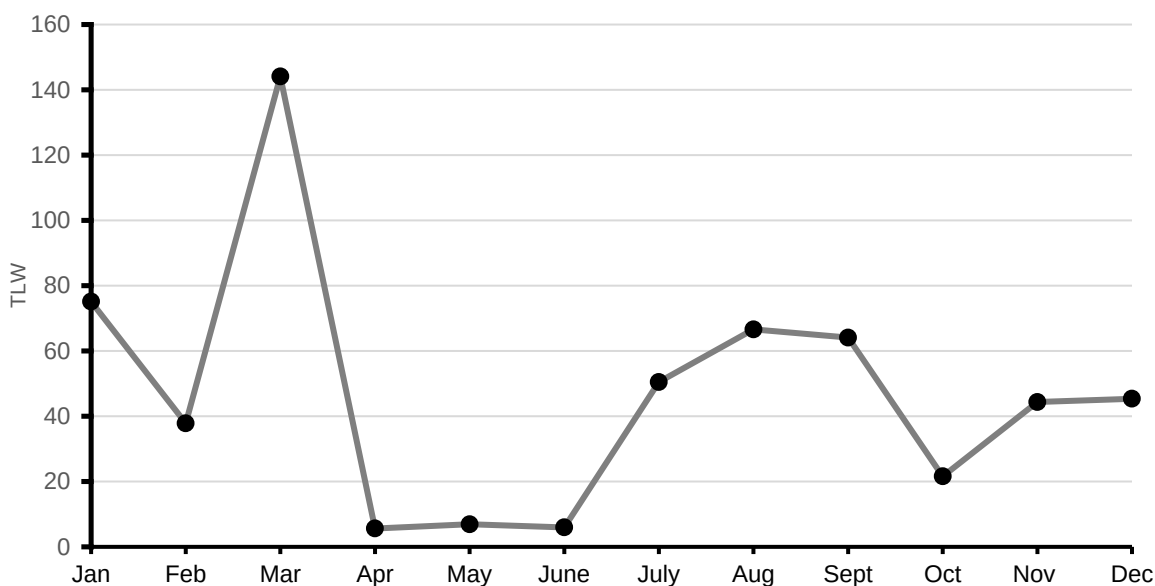


Figure 4.11 – Salmon imports to Bristol from Ireland per month, 1503-1595.

⁷⁰² "Salmon Life Cycle." (Marine Institute of Ireland, 2019) <https://www.marine.ie/Home/site-area/areas-activity/fisheries-ecosystems/salmon-life-cycle>.

⁷⁰³ Ibid.; Went, "The Pursuit of Salmon in Ireland".

In the fifteenth century, only 9 per cent of the salmon carried into Bristol was done so by Irish vessels, with 78 per cent by vessels with English home ports. Interestingly, French ships from Brittany carried 12 per cent of the total. The French involvement here was the highest of any continental ships in the trade of fish from Ireland to England across all the accounts. The sixteenth century witnessed a significant rise in the involvement of Irish vessels, with Irish boats carrying 53 per cent across the whole century, a further 28 per cent by English vessels and 14 per cent by Welsh. In 1516/7 alone, Irish boats carried 82 per cent of the salmon. This data further indicates that, in the sixteenth century, the activities of continental and English merchants and fishers declined in Ireland.

Of the ships that had Irish home ports, ships from Cork and Drogheda carried the most salmon in the fifteenth century. Both these towns are built on major fishing rivers, with Cork located on the River Lee and Drogheda lying at the mouth of the River Boyne.⁷⁰⁴ Other smaller amounts were carried by boats from Waterford, New Ross, Youghal and Kinsale and Ballyhack. Figure 4.12 below shows the fish carried by vessels with Irish home ports in the sixteenth century. Waterford comes out as the highest carrier, followed by Youghal and Cork. Waterford lies at the meeting point of three salmon rivers - the Suir, Nore and Barrow - so it is not surprising to see it as the most significant trafficker of salmon.⁷⁰⁵

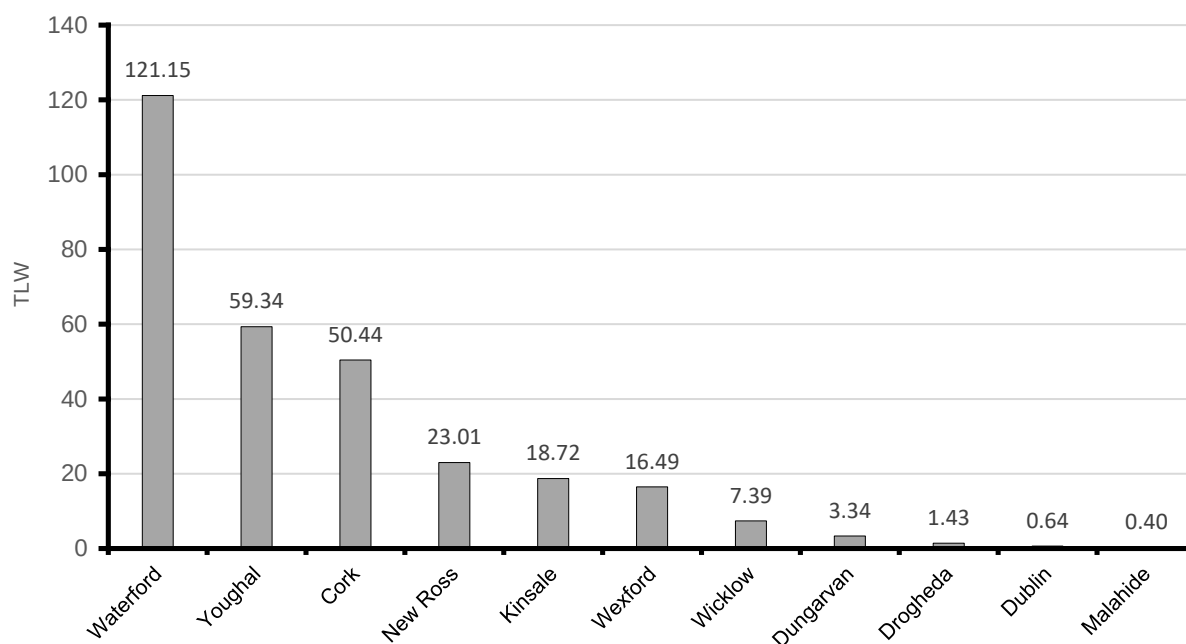


Figure 4.12 – Import of Salmon to Bristol by Irish Home Ports, 1503-1595.

⁷⁰⁴ "The Pursuit of Salmon in Ireland", p. 228; "Material for a History of the Fisheries of the River Boyne".

⁷⁰⁵ "Material for a History of the Fisheries of the River Boyne", p. 228.

In the early modern period, almost all the fish transported overseas needed to be cured with salt to preserve it.⁷⁰⁶ For this reason, salt was crucial for nearly all commercial fisheries in the early modern period. Salt evaporated from seawater in France and Portugal was imported to Ireland in the early modern period, but the Bristol accounts show it was imported from England as well.⁷⁰⁷ The English salt likely came from natural springs in Droitwich, up the River Severn from Bristol. It was said to be purer than the continental salt because it was not contaminated with bird droppings and was thus considered better for curing fish.⁷⁰⁸

Figure 4.13 below shows the total value of salt imported to Ireland from Bristol from 1461 to 1595. In the fifteenth century, the most significant import of salt took place in 1479/80, which was also the year with the highest import of fish. There was also a substantial import in 1465/6, another year with a robust import of fish. During this year, the importation of salt occurred during the same months with the highest exportation of fish, suggesting that salt from England was meeting an immediate demand from the fishers in that year.

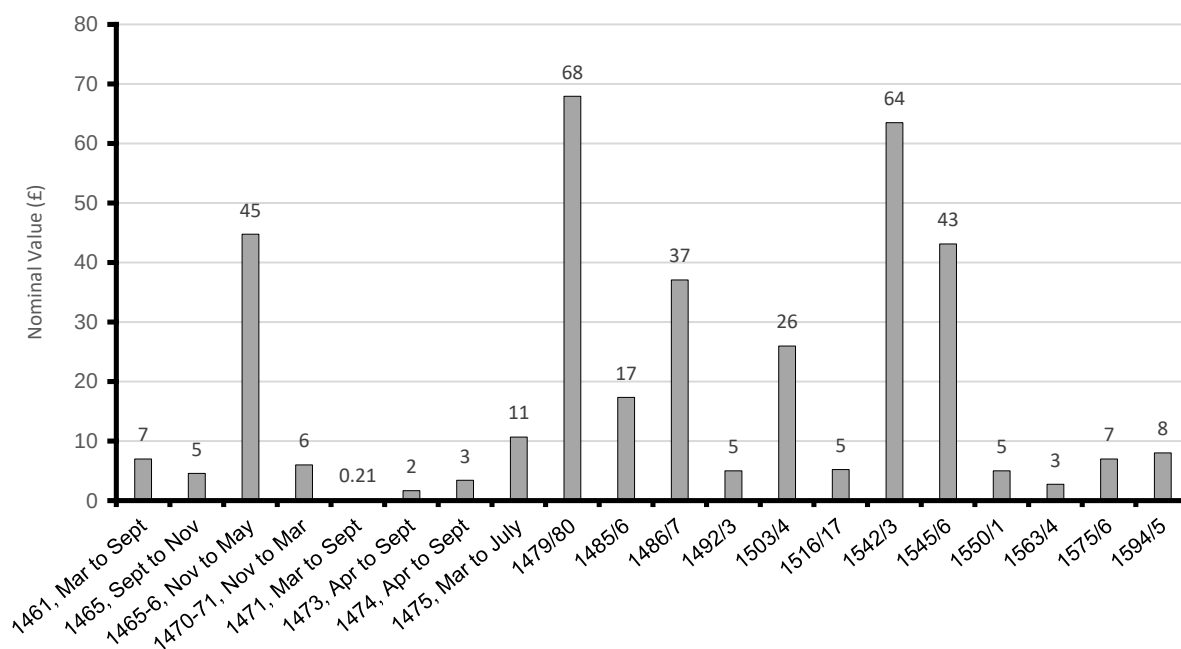


Figure 4.13 – Nominal value of salt exports from Bristol to Ireland, 1461-1595.

⁷⁰⁶ Only air-dried stockfish did not need salt and none of this was found exported from Ireland, Cutting, *Fish Saving*.

⁷⁰⁷ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 164.

⁷⁰⁸ John Collins, *Salt and Fishery* (London, 1682) as referenced in Jones, "Tonnage Estimates of Goods Recorded in the Bristol 'Particular' Customs Accounts: 1465/6, 1485/6, 1503/4.", p. 24; *ibid.*, p. 24.

In the sixteenth-century data, there is no clear link between salt imports and fish exports. Salt imports rose in 1542/3 while fish exports fell in the same year. There is also little salt imported in the year with the largest export of fish (1516/17). Salt imports fell off most dramatically in the middle of the sixteenth century, around the same time fish exports from Ireland declined. By the end of the century, the export of salt from Bristol to Ireland had all but ceased. In response to this, Longfield suggests the majority of Irish salt imports started to come from the continent in this period, and this trade would have filled the gap left by the decline of imports from England.⁷⁰⁹ Unfortunately, we have little evidence to show whether this was the case or not. Additionally, salt has begun to be produced in Ireland by the early seventh century, including at Ballycastle and in Dublin Bay. It is possible this production has even begun by the late sixteenth century and meant imports were no longer as critical.⁷¹⁰

Overall, it is difficult to directly correlate the level of fish exported from Ireland with the corresponding salt imports early in the century. However, we can at least assume that the near collapse of Irish fish exports by the end of the century would have had an impact on the demand for salt in the country.

4.3.2 Chester

Today Chester is not a major port city, but in the fifteenth and sixteenth centuries, it was the principal trading port of north-western England.⁷¹¹ Geographically the port is much further north than Bristol and lies almost directly across the Irish Sea from Dublin. As discussed in Chapter 1, several port books and customs accounts have also been printed for Chester, but unfortunately, these are far less detailed than those for Bristol.⁷¹² The first published custom account for Chester runs from October 1404 to September 1405. There is another Chester custom account running from 1467 to 1468, but it contains few precise details about cargo, rendering any substantive analysis impossible. For the sixteenth century, there is one local custom account transcribed in detail for 1525/6, in addition to several more port books for Chester and Liverpool for the years 1565/6. In his PhD thesis, Donald Woodward also summarised Irish imports for many more of Chester's accounts in the sixteenth century.⁷¹³

⁷⁰⁹ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 164.

⁷¹⁰ Wes Forsythe, Rosemary McConkey, and Colin Breen, "Persistence and risk: salt production in post-medieval Ireland," *World Archaeology* 50, 4 (2018).

⁷¹¹ Armour, "The Trade of Chester and the State of the Dee Navigation, 1600-1800"; Woodward, "The Trade of Elizabethan Chester", p. 1.

⁷¹² Wilson, *Chester Customs Accounts, 1301-1566*.

⁷¹³ Woodward, "The Trade of Elizabethan Chester".

However, the accounts compiled by Woodward were all taken after the law changed in 1563, so they record little fish from Ireland. Overall, the printed accounts are not extensive enough to allow us to estimate the total scale fish trade between Ireland and Chester, but they do still let us identify patterns in that trade and grasp which species and ports were most important.

The 1404/5 Chester account provides a useful comparison to the trade of fish a century later. Unlike the Bristol accounts, those for Chester do not contain nominal values to compare the volume of imports, so alternatively Figure 4.14 below shows the number of shipments made for each type of fish.

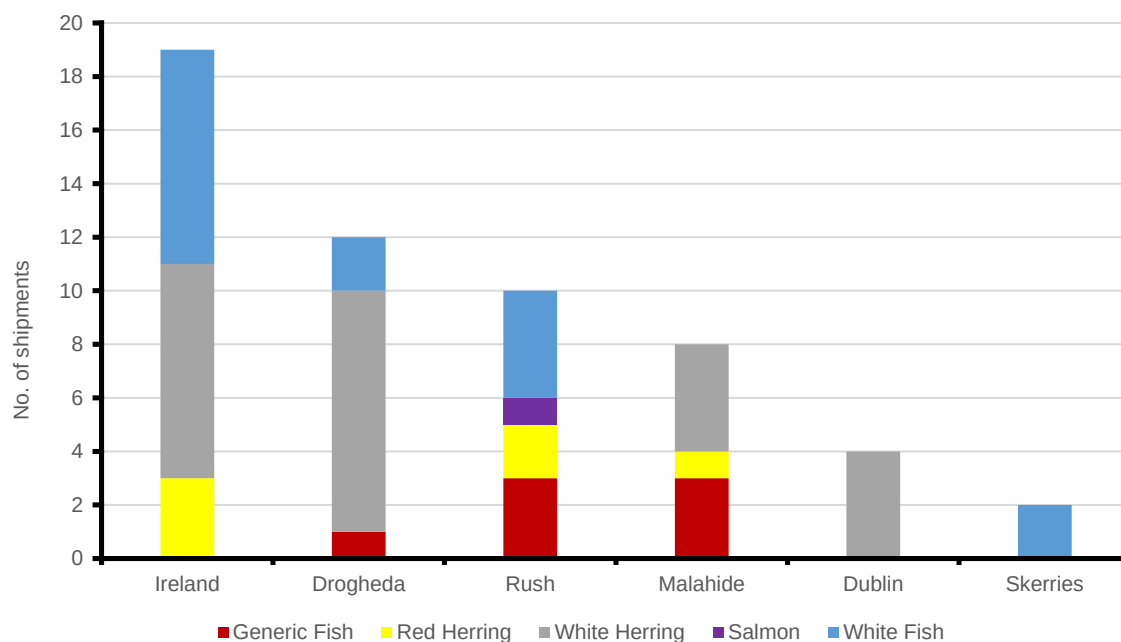


Figure 4.14 – Shipment of fish from Ireland to Chester, 1404-05.

However, unlike many later records, the 1404/5 account does list the specific port of origin for most ships. The first bar in Figure 4.14 shows shipments that had 'Ireland' listed as their origin, while the others show specific Irish ports. The data indicates that most loads of fish came to Chester from Drogheda, followed by Rush and Malahide. Dublin was the fourth most frequent shipper of fish. In terms of species, herring was the most frequently shipped, followed by undefined white fish. The Chester accounts also listed 'fish' as a commodity, which was adjusted to 'Generic Fish' in the data. The ports that traded most with Chester were all in the Pale region on the east coast of Ireland. This is what we would expect to see; the Pale was politically and culturally connected to England and was the geographically closest region to Chester. While Dublin and its satellite ports were mostly absent from the Bristol data, the Chester records show these ports had a stable trading connection to northern England. Almost

all the ships that carried fish into Chester in the early fifteenth century returned to Ireland carrying salt, presumably in part to process further catches.

Herring was by far the most traded species named in the 1404/5 account and was the only species converted to TLW. Over the whole account, 38 TLW of herring was imported, with the most significant spike happening in January and a secondary high the following September. Given modern herring spawning patterns, the peak in September is most likely to come from the spawning populations on the Mourne Coast and the Isle of Man as these populations are most active in autumn.⁷¹⁴ As mentioned in Chapter 2, an entry in the Annals of Loch Cé indicates that fishers from Ireland visited the Isle of Man from at least the thirteenth century.⁷¹⁵ The available information from Chester, combined with the data from Bristol in 1404/5, indicates an active and reasonably substantial trade in fish from Ireland to England from at least the start of the fifteenth century.

The next Chester account with any level of detail about fisheries is that for 1525/6. Table 4.3 below compares the number of shipments of different fish products sent from Ireland to Chester in that account.

Fish Product	No. of Shipments
White Herring	16
Salmon	14
Generic Fish	6
Red Herring	2
Cod	2
Ling	2
Eel	2

Table 4.3 – Number of shipments of fish from Ireland to Chester, 1525-6.

The data illustrates that, once again, herring was the most frequently traded species, followed by salmon. Salmon is far more prominent in this account compared to the one from a century earlier. Hake is noticeably absent from these accounts. However, as mentioned earlier, the primary hake nursery areas are located in the south-east and west of Ireland, so it is not surprising to see an absence of hake traded from ports in the Irish Sea where the fish was not

⁷¹⁴ Brophy, Schön, and King, "Temporal Trends in Stock Origin and Abundance of Juvenile Herring (*Clupea harengus*) in the Irish Sea".

⁷¹⁵ Hennessy, *Annals of Loch Cé* 1, LC1217.2, p. 257.

common.⁷¹⁶ There are a few new species listed in these accounts, namely cod and ling, which were probably categorised together into the more general 'white fish' category in the earlier accounts.

In the 1525/6 accounts, the sailing origin of the ship was only recorded in seven cases, with six of those ships coming from Dublin and one from Howth. Overall, 20 boats were involved in the trade of fish from Ireland in 1525/6, and, out of these, six had unidentified home ports, a further 11 had English, and only three had Irish. These figures make it apparent that English ships controlled a large share of the trade.

Herring and salmon dominated shipments to Chester, so these two species were converted to TLW to provide a clearer idea of the volume of fish shipped. Figure 4.15 below shows the monthly profile of herring imports from September 1525 to February 1526. Once again, the monthly pattern is similar to the other accounts and all lie within the herring spawning window. Overall, 150 TLW of herring was imported, which is not a substantial amount compared to some years in the Bristol accounts. However, fish represents a large portion of the goods imported from Ireland to Chester that year, and the trade was clearly of regional importance. It is also likely that much fish was consumed locally in urban centres like Dublin and Drogheda and any exports represent a surplus in good years.

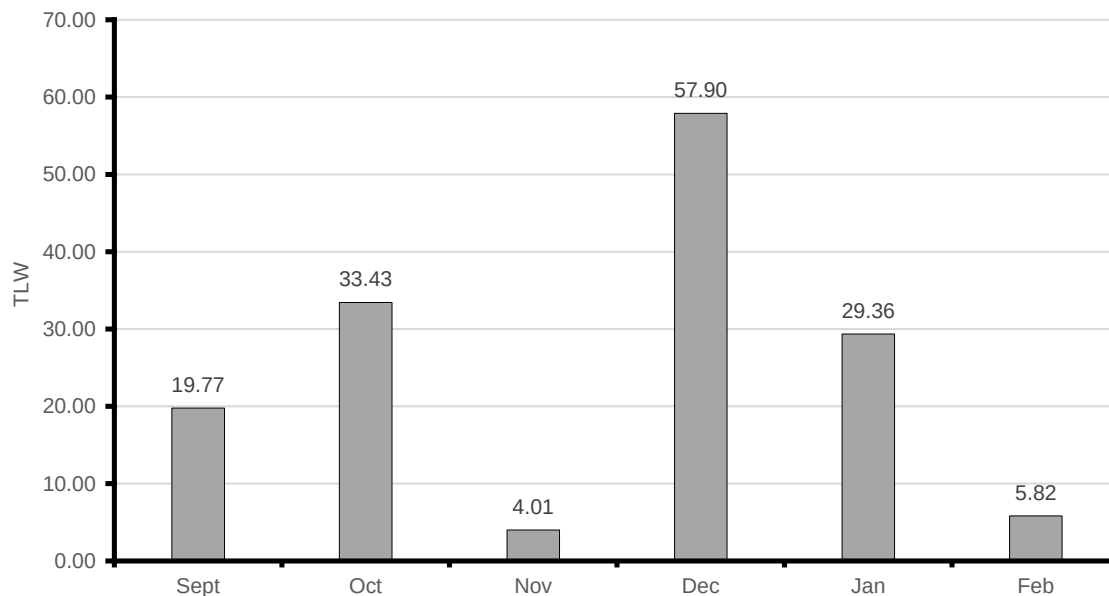


Figure 4.15 – TLW of herring imported to Chester from Ireland, 1525-6.

⁷¹⁶ Hake nursery grounds from, "Ireland's Marine Atlas", <http://atlas.marine.ie/#?c=53.9108:-15.9082:6>; for the modern distribution of hake see, "Irish Groundfish survey (IGFS)", <https://shiny.marine.ie/igfs/>.

Based on the evidence in the sixteenth-century accounts, Dublin was the primary supplier of herring to Chester, and a statute from 1470 mentioned in the previous chapter provides further details on how the herring fishery operated around Dublin. The law opens by saying, 'the herring fishery is always casual and removable by storms and winds from one place to another, and unless they 'be taken during the season they would disappear'.⁷¹⁷ This reference shows that early modern fishers targeted the herring during the spawning season, and they were conscious that the fish changed their patterns of migration over time in response to the weather. However, they could not have understood the larger climatic forces that were driving these changes.⁷¹⁸ The statute ordered that any fishers who wanted to use the land of the Blessed Virgin Mary monastery near Dublin be allowed to do so without hindrance. Fishers were allowed to 'make their harbour' on the land, and 'throw their nets for herrings at all times according to their will'.⁷¹⁹ The Abbey owned close to 17,000 acres of land in Dublin alone, including Bullock Harbour, so it is difficult to know the exact spot to which the statute refers.⁷²⁰ However, based on this description, it does seem likely that herring were spawning in Dublin Bay in the fifteenth century, while none spawn there today.⁷²¹ This possibility will be further discussed in Section 6.3.2 of Chapter 6. The necessity and forcefulness of the statute also highlights the importance of the herring fisheries to the food security of Dublin; it was a priority to keep the fisheries undisturbed and operating.

Salmon was the next most imported fish but was still far behind herring with a total of 19 TLW imported in the 1525/6 account. All this salmon was imported from November to February, with the most substantial spike happening in December. Like herring, the records suggest the majority of this salmon came from the Dublin region, meaning it may have originated in the salmon fishery on the River Liffey.⁷²²

As mentioned, the last transcribed account for Chester covers the 1565/6 accounting year; it records ships entering and leaving both Chester and its satellite port of Liverpool. The Customer's Accounts for Chester in 1565/6 record no fish because of the law passed in 1563

⁷¹⁷ Berry, *Statute Rolls of the Parliament of Ireland, First to the Twelfth Years of the Reign of King Edward IV*, 10 Edward IV., A.D. 1470, p. 665.

⁷¹⁸ Adrianus Corten, "Herring and Climate: Changes in the Distribution of North Sea Herring due to Climate Fluctuations" (PhD diss., University of Groningen, 1994).

⁷¹⁹ Berry, *Statute Rolls of the Parliament of Ireland, First to the Twelfth Years of the Reign of King Edward IV*, 10 Edward IV., A.D. 1470, p. 665.

⁷²⁰ C. Ó. Conbhuí, "The Lands of St. Mary's Abbey, Dublin", *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 62 (1961-1963); B Phadraig, "Speed's Plan of Dublin", *Dublin Historical Record* 10 (1949).

⁷²¹ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds".

⁷²² For more on the Liffey fisheries see, Went, "Fisheries of the River Liffey. Notes on the Corporation Fishery up to the Dissolution of the Monasteries"; "Fisheries of the River Liffey: II. Notes on the Corporation Fishery from the Time of the Dissolution of the Monasteries".

that made Irish fish exempt. However, the Searcher's accounts for Liverpool do record a few shipments of fish. The reason for the recording of these shipments is not apparent; it may have been in error, or perhaps the searcher was confirming that the goods carried by these ships matched their cockets.⁷²³ The Liverpool accounts record three ships arriving with fish. The *Mary* arrived on 8 March 1566 carrying white and red herring and '40 small Newfoundland fish'. The *George* arrived on 25 February 1566 carrying herring and '1 C small Newfoundland fish'; the *John* arrived on 8 March with just red and white herring.⁷²⁴ All three ships had sailed from Wexford. The fact two of these ships were carrying Newfoundland fish is another signal that the fish market was changing in this period, even though the amounts carried were small. We cannot be sure if the ships carrying the fish had caught it themselves or were re-exporting it. As mentioned in the previous chapter, the Spanish cartographer, Alonzo de Santa Cruz, did claim Irish ships were present in Newfoundland in 1540.⁷²⁵ At the very least these imports suggest that Irish towns were receiving shipments of Newfoundland fish in this period. However, the real extent of the Newfoundland fish trade in this period is obscured by the tax status of fish.

However, other evidence illustrates that the trade of herring to Chester did not cease after the 1563 law change. Data compiled by David Woodward shows that 80 tons were imported in 1582/3, and that 'over 90 tons' was brought from Ireland later in 1584/5 and 1587.⁷²⁶ Unfortunately, no further detailed information is provided about these imports. However, Woodward does state that one ton was equal to one barrel. Using this we can calculate that in 1582/3, 101 TLW was imported, with a further 114 tons in 1584/5 and 1587. Overall, the statistics suggest imports of herring in the late sixteenth century declined by about a third from 1525/6 but did not collapse completely. However, after this point, Woodward writes that Irish herring imports dropped further in the 1590s, and herring supplies in Chester 'were supplemented by landings of fish from other English and Welsh ports.'⁷²⁷ Woodward's data also demonstrates that fish was surpassed by wool and skins as the most dominant imports from Ireland to Chester in the last decades of the sixteenth century.⁷²⁸

Woodward also records large shipments of salt leaving Chester in the later sixteenth century, much of which was imported to Wexford, Waterford, and New Ross to supply their fisheries. In

⁷²³ A cocket was a type of certificate given to a merchant that verified he had paid customs on his cargo, Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", p. 2

⁷²⁴ Wilson, *Chester Customs Accounts, 1301-1566*, pp. 88-89.

⁷²⁵ Chapter 6 will discuss the voyages of Nicholas Weston to Newfoundland later in the sixteenth century.

⁷²⁶ Woodward, "The Trade of Elizabethan Chester".

⁷²⁷ *Ibid.*, p. 10.

⁷²⁸ *Ibid.*, p. 8.

addition, in the late sixteenth century, some English ships from around Chester were recorded fishing in Ireland. For example, the *Marten* sailed from the Dee River 'for the coast of Ireland to make herrings' in 1576.⁷²⁹ These voyages may have been a response to the decline in imports from Ireland, as local fishers attempted to supplement supplies lost through imports.

4.3.3 Bridgewater

Bridgewater is located on the south side of the Bristol Channel and was the head port for the coastline of the modern county of Somerset in the English west country. In his PhD thesis from 2009, Duncan Taylor compiled the extant sixteenth-century customs data from Bridgewater.⁷³⁰ He found that in the sixteenth century, fish from Ireland was the most valuable category of goods imported to Bridgewater. Before 1550 all the overseas fish brought into Bridgewater was carried by small Irish vessels with only cargos of fish. These ships carried white and red herring, hake, and generic salted fish.⁷³¹ As discussed in the previous chapter, in the 1490s, both Bridgewater and nearby Minehead imported Irish fish, with Minehead being the most prominent port in that period.⁷³² This connection between south-west England and Ireland continued in the sixteenth century. Overall, Irish fish accounted for 36 per cent of all the goods imported to the Somerset ports. Comparatively, Irish fish accounted for 19 per cent of the total value of goods imported to Bristol. So, while the total imports to Somerset were less than Bristol fish from Ireland overall held a more significant share of the trade.⁷³³ As discussed in the previous chapter, many West Country fishers visited Ireland each year. However, Taylor writes that not only did English fishers travel to Ireland, but many Irish came to south-west England to trade and settle.⁷³⁴ These connections between the two regions facilitated the commercial relationship that brought a high proportion of Irish fish into the area.

Figure 4.16 on the following page shows the value of fish imported from Ireland to Bridgewater over the sixteenth-century accounts. Taylor compiled this data, and he unfortunately only distinguishes between Newfoundland cod and fish from Ireland, which included hake, herring, salmon and salted fish. The data is not available to analyse each species separately. The volume of fish carried is also not provided, only the value. This lack of information means that

⁷²⁹ *Ibid.*, p. 20.

⁷³⁰ Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century".

⁷³¹ *Ibid.*, p. 54.

⁷³² See Chapter 3, Section 3.3.2, Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England", p. 437.

⁷³³ Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", p. 57.

⁷³⁴ *Ibid.*, pp. 55-56.

any live weight calculations are not possible. Despite this, the data still illustrates the overall trend of imports across the century. The data follows a similar pattern to that for Bristol; imports are highest in the first three decades of the century, after which they decline considerably. Post-1563 fish is exempt from tax, but when fish is recorded again in the 1597/8 accounts, the levels of imports have dropped markedly. In contrast, by 1597/8, the import of Newfoundland cod had risen significantly. Taylor believes that two factors led to the decline of Irish imports: the first was the rise of the English involvement in the Newfoundland fishery from the middle of the sixteenth century, and the second was the growth of a domestic English herring fishery.⁷³⁵ In theory, the growth of both these fisheries would have reduced the demand for Irish imports. However, this thesis will argue that other factors contributed to the decline of Irish fisheries, and fishing operations in England and Newfoundland filled the gap.

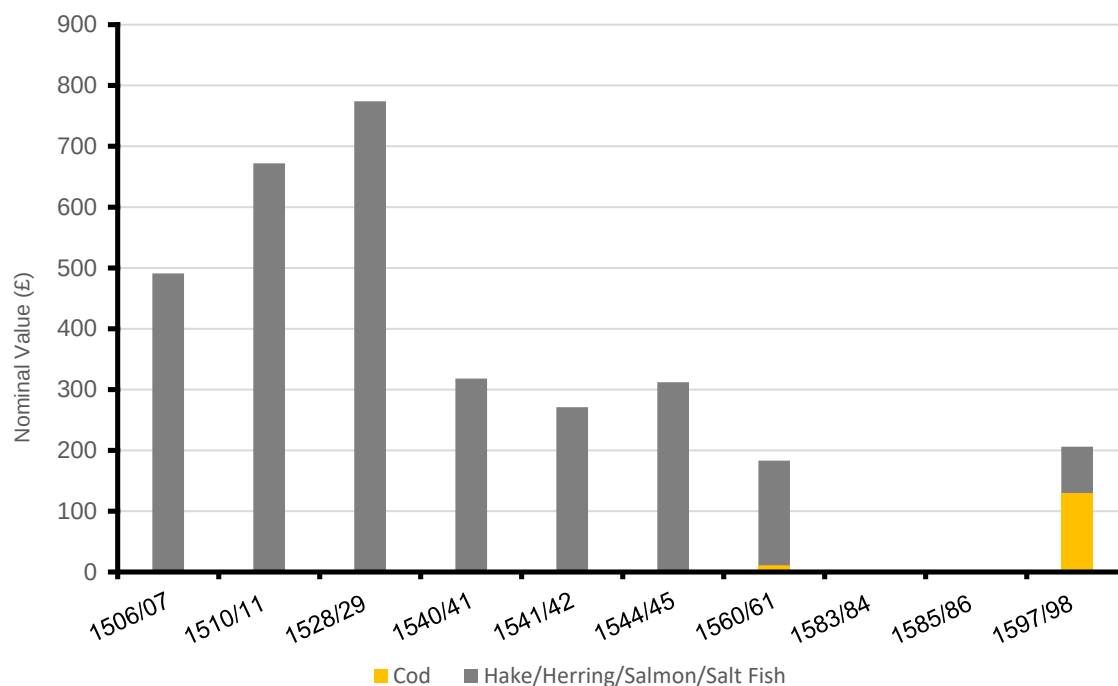


Figure 4.16 – Nominal Value of Irish fish imported to Bridgewater from Ireland, 1506-1598.⁷³⁶

4.3.4 Wales

It was not until 1559 that the Welsh customs system came in line with the English model. Before this point, we have no quantitative records of trade between Wales and Ireland.⁷³⁷ The surviving Welsh port books and customs accounts for the sixteenth century were compiled by E. A. Lewis

⁷³⁵ Ibid., pp. 60-61.

⁷³⁶ Table 3.3, *ibid.*, p. 59. Figures have been pegged to pre 1558 values by the original author.

⁷³⁷ Lewis, *The Welsh Port Books (1550-1603)*, p. ix.

and published in 1927.⁷³⁸ The surviving accounts for Wales are scattered geographically and temporally. Furthermore, as the records only began in 1559, most of the accounts were impacted by the change of law in 1563.

Table 4.4 below shows the shipments of different fish products from Ireland to Wales in all the Welsh accounts from 1559 to 1603. The number of shipments does not reveal how large individual loads were, but it lets us see at a glance which products were moved most. Only 32 shipments of fish were sent from Ireland over the period. Out of these, herring was by far the most common with ten loads of white herring and four of red herring. We also find shipments of 'shotten herring', herring that had already spawned and was therefore of lower quality.⁷³⁹ Conversely, we also find 'full herring', herring that had not yet spawned and consequently were of higher quality. These terms illustrate that not only did fishers target the herring around the spawning season, but they were also aware that the spawning itself had an impact on the quality of the fish they caught. Almost all the herring imports occurred in February, matching the spawning season and import timings from the other accounts discussed so far.

Fish Product	No. of shipments
White herring	10
Shotten Herring	5
Red Herring	4
Full herring	3
White Fish	2
Irish Cod	2
Newfoundland Cod	1
Ling	1
Dry Fish	1
Wet Fish	1

Table 4.4 – Shipment of fish from Ireland to Wales, 1559-1603.

Three Welsh ports were most involved in the trade of fish from Ireland: Beaumaris received eight shipments of fish, Milford nine and Carmarthen eight. The temporal trend of these shipments across all the ports is shown in Figure 4.17. Prior to the change of law in 1563, there were no significant shipments of fish from Ireland to Wales recorded. Likewise, after 1591, when it changed again, there was no spike in imports. Instead, the most significant peak occurred in the 1580s when fish was meant to be exempt, and the reason is unclear. Ultimately,

⁷³⁸ Ibid.

⁷³⁹ Arthur Michael Samuel, *The Herring: Its Effect on the History of Britain* (London: John Murray, 1918), p. 54; Cutting, *Fish Saving*, p. 27.

the data suggests there was no significant trade of fish from Ireland to Wales at any point in the latter half of the sixteenth century. Given the lack of information, live weight calculations were not done in the Welsh case.

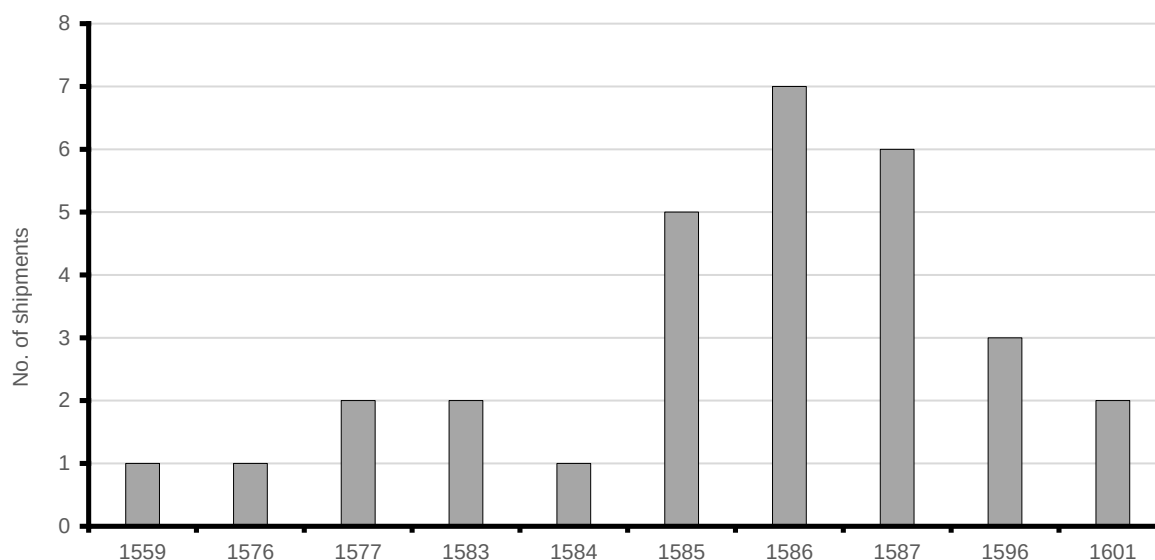


Figure 4.17 – Shipments of fish from Ireland to Wales per year, 1559-1603.

Outside Irish imports, the most common fish imported to Wales was from Newfoundland. Many of these shipments of Newfoundland fish came via England, although some came directly from North American too. Several more ships from Newfoundland are recorded carrying only train oil, which was an oil pressed out of fish; we can assume these ships carried cod too, but customs officials did not record such.⁷⁴⁰ Again the records are not extensive enough to know the true extent of the Newfoundland trade, but we can assume fish from Newfoundland took part of the market share away from both Irish imports and locally caught Welsh fish.⁷⁴¹

Overall, the shipments of fish to Wales from Ireland are too irregular to know definitively how the trade fluctuated over the century. As mentioned earlier, the census of ships in 1566 showed that Pembrokeshire had a fishing fleet of its own and other Welsh towns may similarly have had fleets and local supplies that meant there was little need for Irish imports.⁷⁴² So, ultimately, the evidence suggests that Wales was not a significant importer of Irish fish in the second half of the sixteenth century.

⁷⁴⁰ *Fish Saving*, p. 80.

⁷⁴¹ See, Taylor, "The Maritime Trade of the Smaller Bristol Channel Ports in the Sixteenth Century", pp. 195-198 for more on this in relation to Milford.

⁷⁴² Lewis, *The Welsh Port Books (1550-1603)*, pp. 311-313.

4.3.5 Scotland

Data regarding trade between Irish to Scottish ports is far less extensive than exists for the English ports already discussed. As explored in Chapter 1, Martin Rorke has conducted a comprehensive survey of the available Scottish customs records.⁷⁴³ Rorke found that records of Scottish imports are scant, and many of those in existence do not distinguish between different types of goods or indicate where the products originated.⁷⁴⁴ However, Rorke does suggest that, in the fourteenth century, Scotland may have imported more fish than it exported and while we cannot know for sure, Ireland likely supplied much of that fish.⁷⁴⁵ What the Scottish data does make clear is that from the beginning of the sixteenth century, the export of fish from Scotland itself increased rapidly. Exports, consisting mostly of herring, peaked in the 1540s and continued to be high for the remainder of the sixteenth century.⁷⁴⁶ These high domestic catches made Irish imports unnecessary at the time. It is also notable that Scottish exports rose in the same period that Irish exports were declining, suggesting that Scottish fish took some of the market share previously held by the Irish.

However, there is one exception to this trend, in 1597/8, 402 lasts, and eight barrels of salmon were imported to Scotland and then re-exported from the west coast ports of Ayr, Irvine, and Glasgow.⁷⁴⁷ Unfortunately, the customs officials did not record the origin of this fish, but there is a strong case to be made that Ireland was the origin of this fish. Firstly, the Scottish west coast is close to Ulster, which as we have established, had strong political and economic ties to Scotland and many active salmon fisheries, including those on the Bann, Foyle, and Erne rivers. In 1597 the Bann was controlled by Hugh O'Neill and just the year before, in 1596, Nicholas Weston reported that O'Neill was at Castle Roe for the 'fishing salmon in the Bann'.⁷⁴⁸ O'Neill was fighting the English in the Nine Years War from 1593 to 1603, but the evidence suggests that the Bann fishery was still active and under Irish control in 1597/8. Given the demands the war would have placed on O'Neill's finances, these salmon exports may have been a way to generate additional income.

⁷⁴³ Rorke, "Scottish Overseas Trade, 1275/86-1597"; "Scottish Overseas Trade, 1275/86-1597 Vol. II"

⁷⁴⁴ "The Scottish Herring Trade, 1470-1600", *The Scottish Historical Review* 84, no. 2 (2005), p. 152.

⁷⁴⁵ *Ibid.*, p. 152.

⁷⁴⁶ *Ibid.*, p. 153.

⁷⁴⁷ George Powell M'Neill, ed. *Rotuli scaccarii regum Scotorum (The exchequer rolls of Scotland) VOL. XXIII A.D. 1595-1600* (Edinburgh: H. M. General Register House, 1908), p. 316; Rorke also partially quotes this figure Rorke, "Scottish Overseas Trade, 1275/86-1597", p. 294.

⁷⁴⁸ Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596* (London: Her Majesty's Stationery Office, 1890), no. 27, p. 519, QFD ID 1185. For more on Weston's connections to the Earl see, Ruth A. Canning, "Profits and Patriotism- Nicholas Weston, Old English Merchants, and Ireland's Nine Years' War, 1594-1603", *Irish Economic and Social History* 43, no. 1 (2016).

The Ulster Port Books which run from 1612 to 1615 also show significant exports of salmon from Ulster at a slightly later date, but little of this went to Scotland, with the majority instead heading to markets in England, Spain, and France.⁷⁴⁹ These records then suggest that the export of salmon to Scotland was not a typical trade and was done because other markets were cut off to O'Neill due to the war. Furthermore, all the salmon imported to Scotland was re-exported, so clearly there was little local demand for imported salmon, and instead, Scotland was used to transit the fish out of Ireland and on to better markets.⁷⁵⁰

When we convert the salmon import to live weight, it equals 576 TLW, which would make it the highest single import of salmon across the fifteenth and sixteenth centuries. While these exports represent only one year, they do suggest that in previous years the salmon fisheries in Ulster had produced similar catches, but these went to ports in England, France and Spain and went mostly unrecorded. The evidence also suggests that there was no regular trade in fish between Ireland and Scotland, mainly because Scotland had a domestic supply of fish that made Irish imports unnecessary.⁷⁵¹

4.3.6 The Importance of the Fish Trade

The previous sections have examined the character and scale of the fish trade from Ireland to Great Britain but have said little about the importance of fish compared to all other commodities. To understand this further, we can compare the nominal value of fish to that of all other goods in the Bristol accounts each year. The Bristol accounts were chosen for this because they are the most extensive and reliable. Figure 4.18 shows the nominal value of all fish products imported from Ireland to Bristol, compared to all other commodities starting in 1461 and running to 1601.

⁷⁴⁹ Hunter and Scott, *The Ulster Port Books, 1612-15*, the full Ulster Port Books data is contained in the FTD and can be found hosted online, <http://hdl.handle.net/2262/9609>.

⁷⁵⁰ The full context around the fisheries and the Nine Years War will be discussed in the following chapter.

⁷⁵¹ Remembering that even the salmon was re-exported and not consumed locally in Scotland.

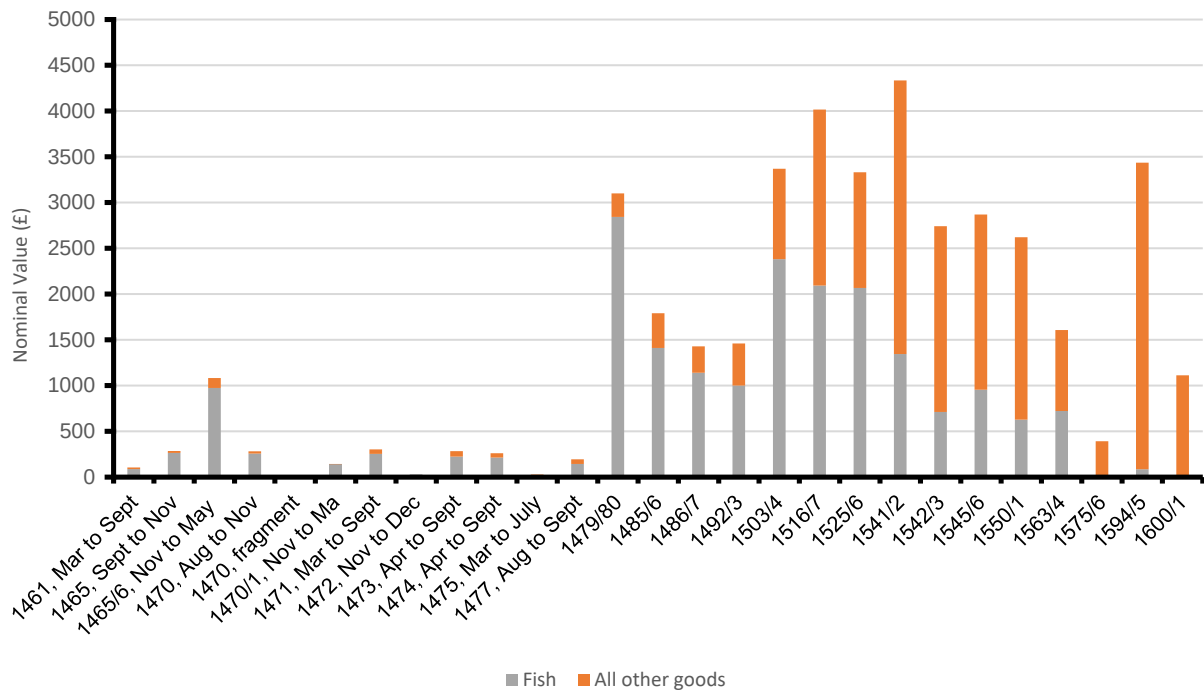


Figure 4.18 – Nominal value of fish imports compared to all other commodities from Ireland, 1461-1601.⁷⁵²

In the fifteenth century, fish accounted for 84 per cent of the nominal value of all goods imported from Ireland to Bristol. This data shows that fish was by far the most dominant import group over the century, despite many of the accounts not covering the crucial winter months when most fish were imported. As mentioned, in the 1404/5 accounts, £2,091 of Irish goods were imported, of which £1,754 was fish, meaning fish also accounted for 84 per cent of imports at the very start of the fifteenth century. After fish, the next most valuable commodities imported during the century were skins, hides and cloth, but these goods did not come close to the total value of fish. However, fish declined in importance toward the end of the fifteenth century; it accounted for 91 per cent of imports in 1479/80 and 69 per cent in 1492/3.

Despite this gradual decline, fish remained the dominant import at the beginning of the sixteenth century. In 1503/4, fish still accounted for 71 per cent of the total value of goods imported. However, even by 1516/17, this had declined rapidly to 52 per cent and dropped even further to 24 per cent by 1550/1. In 1563/4, the last year before fish was exempt from tax, there was a slight recovery to 45 per cent, but this year also saw the general decline of all trade. By the time fish is re-recorded in 1594/5, it only accounts for 2.5 per cent of imports. The export commodities that witnessed the highest growth in the sixteenth century were cloth, followed by animal hides and re-exported wine. Additionally, from the 1540s onward there was a general

⁷⁵² The values after 1558 have not been adjusted in this data as the overall trend is not important compared to the relative importance of the series in each year.

shift of exports towards more manufactured goods and away from animal products like fish and hides.⁷⁵³

Overall, this data shows that fish was a vital export commodity from at least 1404 and would later reach a peak of importance in the 1480s. After this, fish gradually declined in importance over the next several decades before being superseded by other commodities in the latter half of the sixteenth century. Over the whole period, fish was by far the most important export commodity Ireland produced. Therefore, understanding what drove this export of fish and what ultimately led to its decline is not only crucial to the history of fisheries, but also the broader economic history of Ireland.

4.4 The Trade to Continental Europe

The data presented thus far do not inform us about the Irish trade with continental Europe. The qualitative evidence discussed in section 4.2 highlighted that there was an active trade to Spain and France in the later sixteenth century that involved fish. The extent of that trade is largely unknown in the early modern period due to a lack of sources, but it is worth exploring the scant evidence that is available for what it can expound regarding the extent of fish traded to continental Europe.

In the late fifteenth century, roughly 10 to 20 Spanish ships were visiting Bristol every year, with many more going to London (46 in 1490/1).⁷⁵⁴ Wendy Childs surmises that the trade from Spain to Ireland in the same period could not have matched or exceeded these figures, which seems like a fair assessment.⁷⁵⁵ Research from other historians has shown that hides were likely the primary export from Ireland to continental Europe from the fourteenth to sixteenth centuries.⁷⁵⁶ In 1479/80, when fish imports to Bristol were peaking, only 950 hides from Ireland were imported to the city. Tim O'Neill resultantly suggests that Wales was supplying Bristol's leather industries, and therefore there was no market for Irish hides in England. O'Neill assumes therefore that Irish hides were destined for continental Europe.⁷⁵⁷ If this was the case, then fish was not an essential part of the trade to continental Europe, as there was a ready market in

⁷⁵³ Flavin, *Consumption and Culture in Sixteenth-Century Ireland: Saffron, Stockings and Silk*, p. 27.

⁷⁵⁴ Childs, "Ireland's Trade with England in the Later Middle Ages".

⁷⁵⁵ *Ibid.*, p. 9.

⁷⁵⁶ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 77; Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 61.

⁷⁵⁷ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 77.

England. However, there is still no substantial evidence to quantify the scale of the Irish hide trade to Europe.

O'Neill further claims that within Europe, Flanders was the primary market for Irish hides, but ultimately provides little proof to support this theory.⁷⁵⁸ On the contrary, other evidence would seem to contradict this directly. A pilotage account dating 1486/7 from the city of Bruges shows no Irish ships; another from 1499 contains three ships that were of Irish or English origin, and a third account from 1500 again has no Irish ships. Three accounts alone do not prove there was no Irish trade to the Low Countries, but they suggest it was not a significant trade.

As mentioned at the start of this chapter, as the sixteenth century progressed, there were increasing numbers of voyages from Ireland to Spain recorded in the State Papers. However, most of these voyages were recorded in connection with the conflict between England and Spain at that time. Some of these records reference intelligence or violence, while others relate to inquiries and grants of permission for the continental trade. For this reason, it is difficult to assign much meaning to these records as indicators of the volume of trade.⁷⁵⁹

The best evidence for Irish trade with France comes from the port of Bordeaux. In the early fifteenth century, the ports of New Ross, Cork and Waterford were the most frequent Irish trading partners with Bordeaux, mostly accepting imports of wine. However, the Irish trade only accounted for two per cent of the shipping at Bordeaux in this period.⁷⁶⁰ Notarial records from Bordeaux can tell us more about the late fifteenth and early sixteenth-century trade. Out of the 71 surviving notarial contracts for 1445-75, only three refer to cargos from Ireland. Then out of a further 520 records up to 1500, Irish destinations are only quoted 19 times.⁷⁶¹ Based on this evidence, Irish trade with Bordeaux was not particularly significant, but it was increasing toward the end of the fifteenth century. Elsewhere in France, port accounts for Dieppe from 1470 to 1480 show no Irish ships or merchants at all.

The French historian Jacques Bernard has compiled further data from the notarial records for the early sixteenth century. His research showed that in the first two decades of the century, '150 Irish merchants engaged in the Bordeaux trade against some 75 Gascons engaged in the Irish trade'.⁷⁶² These records do not allow us to quantify the volumes of goods traded, but they do provide some indication of the goods traded most. Wine, salt and honey dominated the imports from France to Ireland in the early sixteenth century. The main commodity imported

⁷⁵⁸ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 78.

⁷⁵⁹ Childs, "Ireland's Trade with England in the Later Middle Ages", p. 9.

⁷⁶⁰ *Ibid.*, p. 10.

⁷⁶¹ *Ibid.*, p. 11.

⁷⁶² Bernard, "The Maritime Intercourse Between Bordeaux and Ireland, c. 1450 - 1520", p. 13.

from Ireland and exchanged for wine in the early sixteenth century was hides. Bernard writes that other goods typically imported from Ireland included Irish cloth, mantles, and fish. The main fish species imported to Bordeaux from Ireland were herring and hake, while 'Bay salt' was the major export from Bordeaux to Ireland.⁷⁶³ The notarial records also show that many merchants combined trading with fishing in Ireland. The observations of Captain Plessington also support this.⁷⁶⁴ In 1601 he commented that French merchants in Donegal most often brought wine and salt which was exchanged first for hides, tallow, and fish.⁷⁶⁵

The data suggest that Irish trade with France was on an upward trajectory from the late fifteenth century and into the sixteenth. However, it is not possible to quantify this trade and Bernard concludes that many of its aspects - such as the currency used, insurance and the temporary nature of merchant partnerships - suggest a trade that was still largely medieval in character and did not undergo significant development in the sixteenth century. Overall, based on the numbers of merchants in the notarial records, the Irish trade with France was still far smaller than the trade with England.

In 1563 the English Admiralty Court took a deposition from a Hamburg merchant by the name of Peter Rutkins. He told the court that the merchants of 'the Hanse, as well as of Hamburg and other places haunt the realm of Ireland for traffic of hides to pass unto St Malo as they do all other nations'.⁷⁶⁶ While only one anecdotal account, it does suggest that Hansa and German merchants did engage in the Irish hide trade through French ports. The Hanseatic League was the most extensive commercial consortium in medieval and early modern Europe, so we would expect to see Hansa presence in Ireland. In his monograph on the Hansa trade, Philippe Dollinger makes no mention of a significant Hanseatic presence in Ireland but does note that the League's merchants preferred to sail along the west coast of Ireland to reach Spain because it avoided the dangers of pirates present on other routes.⁷⁶⁷

As explored in Chapter 2 and 3, new archaeological evidence and analysis are shifting how we think about the economy of Gaelic Ireland.⁷⁶⁸ The evidence presented here, especially that related to England, is mostly focused on the trade from the Old English ports in Ireland. There

⁷⁶³ Ibid.

⁷⁶⁴ His description was discussed in more detail in Chapter 3, Section 3.3.5.

⁷⁶⁵ Captain Charles Plessington to the Earl of Nottingham, Lord High Admiral, and Secretary Cecil, 2 Sept 1601, SP 63/209/1 f.148, QFD ID 1397.

⁷⁶⁶ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, p. 127, p. 25.

⁷⁶⁷ Dollinger, *The German Hansa*, p. 350.

⁷⁶⁸ Loingsigh, "An Assessment of Castles and Landownership in Late Medieval North Donegal", p. 148; Gardiner and McNeill, "Seaborne trade and the commercialisation of fifteenth- and sixteenth-century Gaelic Ulster"; Breen and Raven, "Maritime Lordship in Late-Medieval Gaelic Ireland".

could have been a large, unregulated, and unrecorded trade taking place in areas like Donegal, like that described by Captain Plessington. Ships would arrive from abroad and exchange goods through barter. As evidence for the growth of this exchange, Mark Gardiner and T. E. McNeill have written that the increase of conflict in Ulster in the second half of the sixteenth century required weapons that could only have been paid for 'by means of the commerce in fish and through the ports already serving it'.⁷⁶⁹ The shipment of salmon to Scotland in 1597/8 may have been an example of such a trade. However, we lack further records to detail the export of fish from Ulster in the sixteenth century.

However, as explored in the previous chapter, the Spanish and French both had fishing fleets which regularly visited Irish waters in the fifteenth and early sixteenth centuries. This activity facilitated the exchange of fish for other goods, such as wine, and brought money to coastal communities in Ireland through taxation. This activity would have reduced the demand for imported fish in the home markets of the fishing fleets. Additionally, Spain and France were some of the first nations to become involved in the Newfoundland cod fishery which returned massive catches to their home ports.⁷⁷⁰ This new source of fish would have also reduced demand in those places during the early sixteenth century.

On the whole, we lack the hard evidence to tell us the scale of trade between Ireland and continental Europe in the fifteenth or sixteenth centuries. Wendy Childs has written, 'unless a long series of customs accounts or similar records is unearthed, it will be impossible to assess orders of magnitude' for the continental trade.⁷⁷¹ Undoubtedly, continental trade was important in relation to specific commodities, such as salt and wine, but there is no real indication that fish was a significant part of the trade. In contrast, the sum of all the evidence suggests that England was Ireland's largest trading partner in the fifteenth and sixteenth centuries, and fish was a vital part of that trade for many decades.

4.5 Trade Data Conclusion

The data shows that England and Wales were the primary recipients of Irish fish in the fifteenth and sixteenth centuries. Some salmon also went to Scotland, but this was irregular. Likewise, some merchants did carry Irish fish to continental Europe, but the evidence suggests this trade was inferior to that with Great Britain. Regarding the exports from Ireland to England and Wales,

⁷⁶⁹ Gardiner and McNeill, "Seaborne Trade and the Commercialisation of Fifteenth- and Sixteenth-Century Gaelic Ulster", p. 34.

⁷⁷⁰ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

⁷⁷¹ Childs, "Ireland's Trade with England in the Later Middle Ages", p. 9.

the most important fish species were herring, hake, and salmon. Significantly, for many years in the fifteenth and early sixteenth centuries, these fish were the largest exports from Ireland overall.

Figure 4.19 below shows the total TLW of the top three species imported from Ireland to England and Wales from 1450 up to 1603.⁷⁷² Overall, there are significant gaps in the available data from England and Wales too, but we can observe a few general trends over the decades. Imports peaked in 1479/80 and then declined slightly before remaining relatively high and stable for the following four decades. Imports had dropped considerably by the 1540s and continued to fall over the next two decades until 1563 when the law dictated fish would no longer be recorded in the accounts. Customs officials in Chester did record some Irish fish during the 1580s, but even these show a decline from earlier highs.

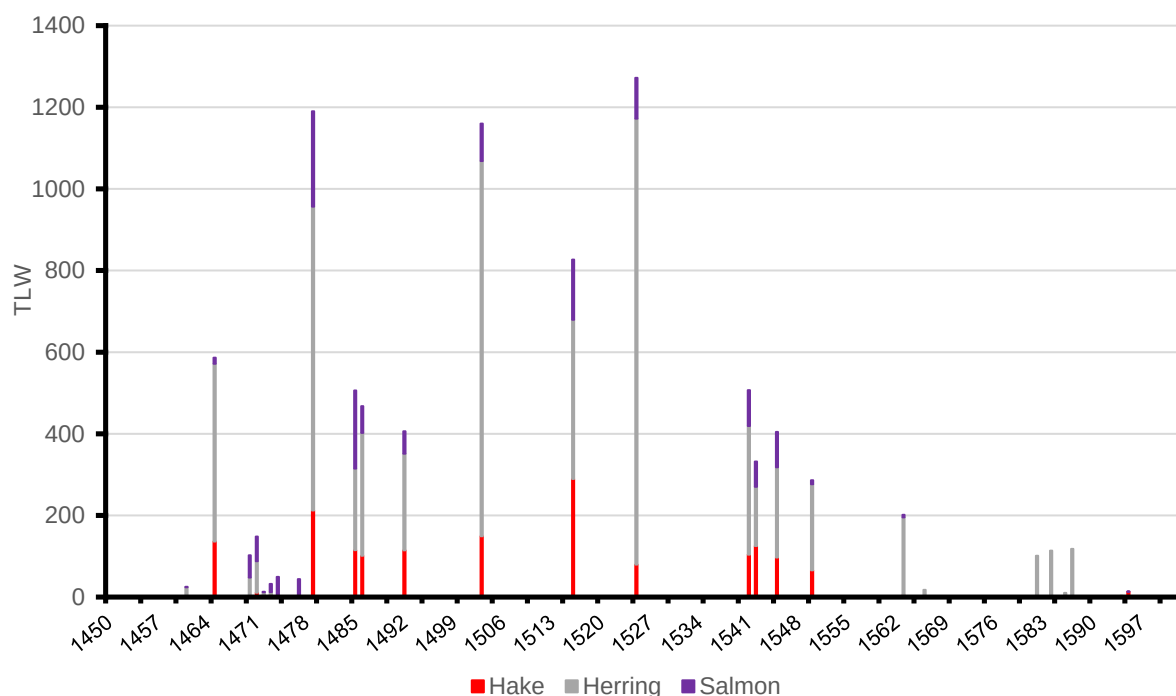


Figure 4.19 – Total TLW of Herring, Hake and Salmon imported to England and Wales from Ireland, 1450-1603.⁷⁷³

When records of fish resumed after 1591, only tiny amounts of Irish herring were recorded, suggesting that the drop observed earlier in the century continued and that ultimately a

⁷⁷² The accounts from Bristol and Chester for 1404/5 were not included here, because the Bristol data from that year was not detailed enough for Live Weight calculations, and only a further 38 TLW was recorded from Chester.

⁷⁷³ Within this graph data covering accounting years was grouped into the first year in that pair. For example, data for 1503/4 is shown as a single total for 1503. This provides a more realistic year on year comparison.

combination of factors meant the export trade from Ireland to England and Wales had all but ceased by 1600. The data also highlights that in almost every year, herring dominated exports as the most important species.

The Scottish data from 1597/8 was left off Figure 4.19 because it was such an isolated event, and we have no longer-term series from Scotland from which to compare. The salmon exports in that year may have been an anomaly, but without a longer series of salmon exports to Scotland we cannot know it compared to previous years. However, it is likely that in previous peaceful years before 1597/8 most of the salmon exported from Ulster was caught by visiting fishers, meaning no export trade was required. The Nine Years War may have disrupted this and O'Neill and the Irish to look for alternative export routes, and consequently, the fish went to Scotland. If this was the case, then even here traditional commercial relationships had been disrupted by the end of the sixteenth century.

The graph above uses live weight, but due to data limitations, we cannot do TLW calculations for every species and every trade account. To overcome this, the following Figure 4.20 indicates the nominal value of fish imports per year. Where the nominal value is not available, the graph shows the number of shipments of fish made per year on a secondary axis. This graph contains data concerning every species of fish exported from Ireland, not just the big three. The main difference between the trend in Figure 4.20 and that in 4.19 is the increased shipments recorded during the period when fish was exempt from tax in the years after 1563. However, these shipments only strengthen the hypothesis that the trade of fish declined toward the end of the century, as they still show a dramatic fall from previous shipment levels.

These graphs represent a significant conglomeration of data and provide the most comprehensive picture for the scale and trajectory of Irish fisheries in the fifteenth and sixteenth centuries yet compared. They are far from perfect; we lack the records to know the full extent of fish extractions from Irish waters in this period, but the data presented here represents the broad trends in the fisheries. Irish fisheries experienced a boom period in the late fifteenth and early sixteenth centuries; at that time, they were one of the most important industries on the island. In the later sixteenth century, they suffered a dramatic decline – one that would have broader implications for the development of Irish society and culture. This chapter has focused on quantitatively tracing that growth and decline; the following two chapters will explain why it occurred.

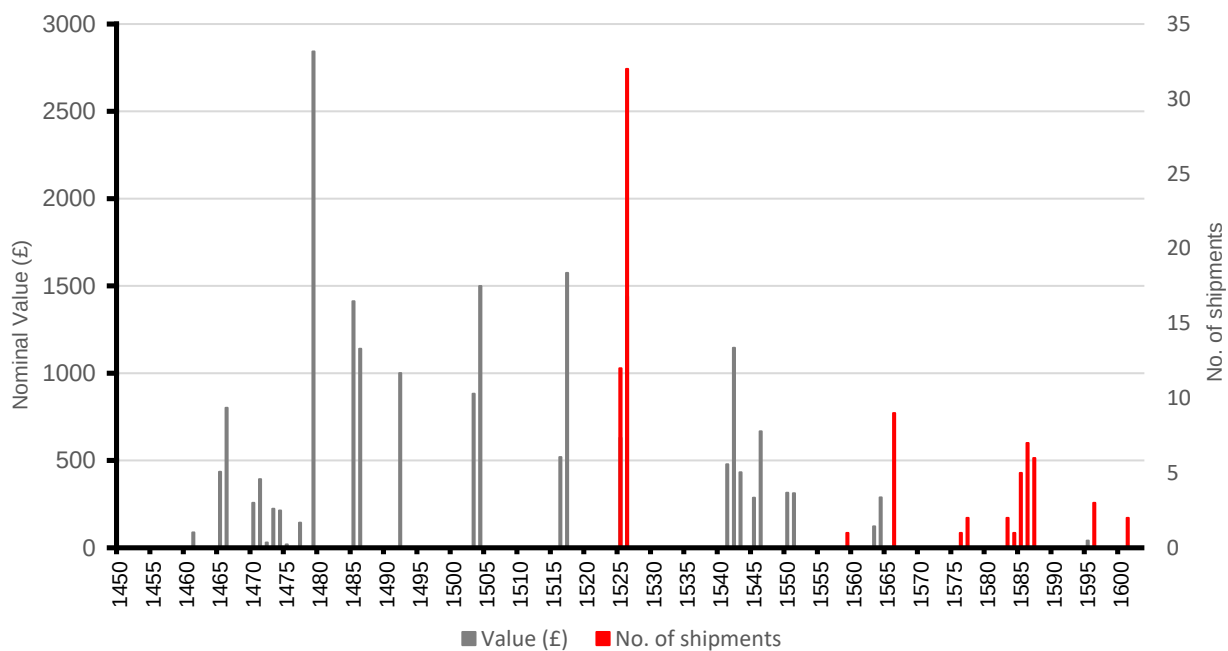


Figure 4.20 – Nominal Value and number of shipments of fish from Ireland to England and Wales, 1500-1603.⁷⁷⁴

In contrast to the declining trend of Irish imports, the sixteenth century saw a rapid increase in the importation of fish from Newfoundland to England and Wales. The data for Newfoundland imports is very patchy, as fish from the region was always tax-exempt. Nevertheless, Figure 4.21 on the next page pulls together the total value and number of shipments of Newfoundland fish across all the accounts. The first peak in Newfoundland imports happened in the 1540s, during the same time period that Irish imports were sharply declining. Also, by the end of the century, when Irish imports had ceased, we continued to see the importation of fish from Newfoundland. We cannot know for sure what amount of fish came into England and Wales from Newfoundland, but it seems evident that this new product took at least part of the market share previously held by Irish fish. Furthermore, this, alongside other evidence, demonstrates that many English and Irish fishers left behind old fishing grounds in Ireland in favour of the more profitable catches in the New World.

⁷⁷⁴ Post-1558 customs values have been pegged to pre-1558 rates.

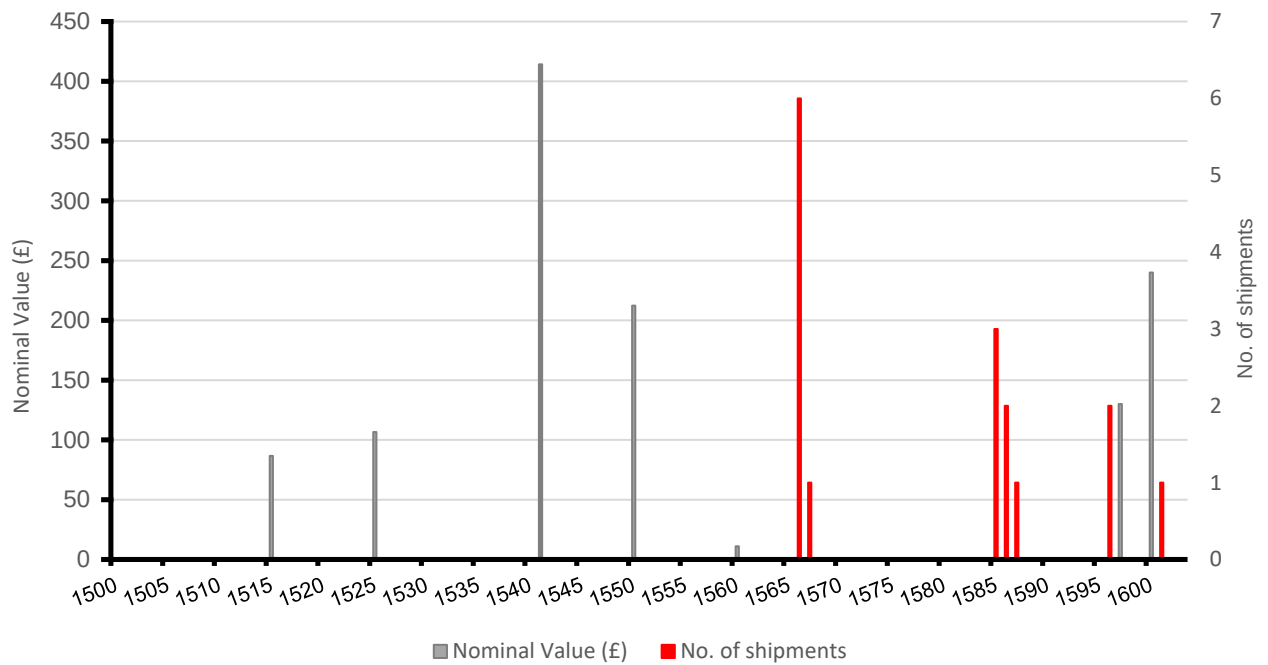


Figure 4.21 – Nominal value and number of shipments of Newfoundland fish imported to England and Wales, 1500-1603.⁷⁷⁵

This trade data has also shown that the importation of most species was very seasonal, and often those import seasons were dictated by the biology and spawning periods of the target species. Only the timing of hake imports seemed to contradict other historical information suggesting fishers targeted the species during the summer months when the hake spawned. However, in the case of salmon and herring, the level of imports month on month matched very well with modern observed spawning periods. Other factors, such as demand during Lent and trade fairs, impacted imports during some years. Ultimately, species' spawning periods determined when they were available in large numbers for fishers to target and consequently drove the timing of imports.

The data also highlights the Irish ports that exported the most fish to England and Wales. All the most dominant ports discussed here had either English or Old English roots. Some regional trends also emerged: Bristol in the south had a more reliable trading connection to ports like Cork, Youghal, Waterford and Wexford, compared to Chester which had stronger ties to Dublin and Drogheda. The Welsh ports traded with ports in the south-east, like Waterford, and had a strong connection to eastern ports such as Dublin. The data presented highlighted that there existed a robust mercantile community in many Old English ports. For the first half of the

⁷⁷⁵ Post-1558 customs values have been pegged to pre-1558 rates.

sixteenth century, fish was one of - if not the - most crucial commodity these merchants carried to England. Many of these towns, particularly in the south-east, were also built close to vibrant marine habitats. These marine habitats, such as herring spawning grounds, hake nursery grounds and salmon rivers, provided the aquatic resources that made the trade possible. It was this confluence of ecology, geography and strong trading towns that made the south-east the most prosperous region in Ireland for fisheries.

The accounting year with the highest combined export of herring, hake and salmon was September 1525 to September 1526 when exports totalled 1,271 TLW. The full scale of all fish extracted from Ireland in that year would have been higher if we factored in domestic consumption and exports to other areas for which we have no records. On a European scale, this level of exports is not significant. The largest European fishery by the end of the sixteenth century was the Dutch herring fishery which reached a peak of 60,000 TLW extracted around 1600.⁷⁷⁶ However, this was by far the most organised and professional fishery in Europe. When compared to other smaller European nations, the Irish figure is relatively similar. For example, the Danish North Sea fisheries in the sixteenth century, which focused on flatfish, reached a peak of 3,000 tonnes around the middle of the sixteenth century.⁷⁷⁷ When domestic consumption and other hidden exports are factored in, then the Irish total would likely match the Danish figure. As a comparison to this data, Section 4.7 later in this chapter examines the data from the seventeenth century that provides us with the first reliable figure for the total export of fish from Ireland.

4.6 Fish Prices

4.6.1 English Prices

As explained previously, the nominal or customs values used in the analysis above were not market values, but instead fixed prices set by a central book of rates. So, to establish the actual monetary value of exports, we must rely on other sources. As most fish exported from Ireland was brought to Bristol, it would be ideal to have a price series from there. Unfortunately, there exists no extensive price series for Bristol that cover our period, so we must use data from other locations in England. The best price series for southern England that covers the sixteenth

⁷⁷⁶ Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860*, pp. 69-70.

⁷⁷⁷ Poul Holm, "The Danish North Sea Coast Fisheries, 1537-1655", *In Progress* (2020), p. 13.

century was compiled by Thorold Rogers and published between 1866 and 1892.⁷⁷⁸ Rogers' work was subsequently digitised and published online as part of the Allen-Unger global price dataset.⁷⁷⁹ This digital version is utilized in the analysis below.

Rogers' prices come from assorted locations around southern England. For this reason, there may be some regional variation in the trend.⁷⁸⁰ However, for most of the period under consideration here, the prices came from King's College in Cambridge.⁷⁸¹ A further limitation of Rogers' series is that it only contains prices for white herring, rendering it infeasible to calculate the value of other essential imports like hake or salmon. Gregory Clark has compiled a price series for other commodities in England that does include salmon, but his data is based on statistical interpolations and is not as reliable as Rogers' series.⁷⁸²

Rogers' series comprises the price of a barrel of white herring for most years between 1540 to 1603. All herring shipments from Ireland to England were converted to barrels to establish the total value of imports. The number of barrels imported was then multiplied by the price in that year. If a price was not available for that year, the price from the closest year was used. The results of this are shown in Figure 4.22 on the following page, which sets out the value of one barrel of white herring per year (orange line) and the total value of imports from Ireland for every year with import data. The price of a barrel of white herring remained relatively stable until the late 1550s when the debasement of the pound in that period caused rapid inflation to all commodities.⁷⁸³ However, the debasement does not significantly impact the total value of Irish herring imports across the century, as the largest herring imports took place before it occurred.

⁷⁷⁸ J. E. T. Rogers, *A History of Agriculture and Prices in England*, 7 vols (Oxford: Clarendon Press, 1866-1892).

⁷⁷⁹ Robert C. Allen and Richard W. Unger, eds., *London Prices, Allen - Unger Global Commodity Prices Database* (Amsterdam: International Institute of Social History, 2015), <http://www.gcpdb.info/>.

⁷⁸⁰ My thanks to Al Matthews for allowing me to use his research on the reliability of these sources, see Al Matthews, "European Fish Market Dynamics from 1500 to 1800" *Submitted Nov 2020* (PhD diss., Trinity College Dublin, 2020).

⁷⁸¹ Prices come from King's College from 1401 to 1582, Rogers, *A History of Agriculture and Prices in England*, 7 vols.

⁷⁸² Gregory Clark, "The Price History of English Agriculture, 1209-1914", *Research in Economic History* 22 (2003); "The Long March of History: Farm Wages, Population, and Economic Growth, England 1209-1869", *Economic History Review* 60 (2007); Clark's data is ranked as 'poor' by Robert C Allen and Richard Unger in the introduction to the International Institute of Social Histories price data collection, Allen and Unger, *The IISH List of Datafiles of Historical Prices and Wages*.

⁷⁸³ C. E. Challis, "The Debasement of the Coinage, 1542-1551", *The Economic History Review*, 20 (1967); Y. S. Brenner, "The Inflation of Prices in Early Sixteenth Century England", *The Economic History Review* 14 (1961).

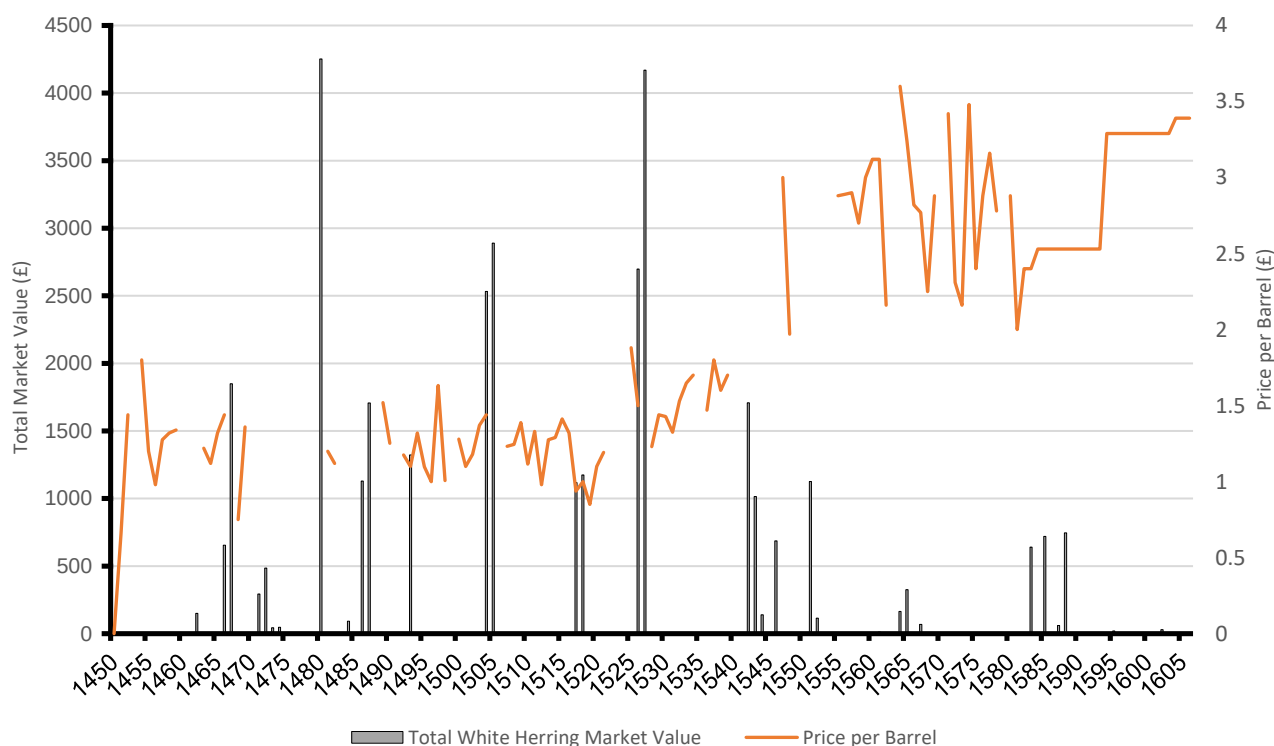


Figure 4.22 – Market price and total value of white herring imports to England, 1450-1603.

The total value of Irish white herring imports in the fifteenth century was £6,558, while £15,969 worth of fish was imported from Ireland in the sixteenth. Across both centuries, the total value was £22,546.⁷⁸⁴ The accounting year with the highest single value overall was 1525/6 when £5,638 worth of white herring was imported. These value figures based on market prices are double the value determined using the customs values. However, these market value figures are far from perfect; they do not reflect the total economic value of all fish imports, as they only cover white herring for a limited number of ports and years. If we included every fish product and every export destination, the figure would naturally be far higher. However, they are still the best figures we can achieve at this juncture for herring and serve to illustrate the inadequacy of the customs values for calculating the real economic value of the fisheries. It is difficult also to compare the importance of this trade to others during the sixteenth century due to the lack of available figures that do not rely on customs values. The inflation post-1558 additionally makes a comparison to earlier prices challenging.⁷⁸⁵

As discussed above, many of the ships carrying fish from Ireland were not Irish-owned, so ultimately it is difficult to determine what portion of revenue from the fish trade went back into Ireland. The question surrounding the ownership of Irish fisheries has been approached by

⁷⁸⁴ All figures have been rounded to the nearest pound. Based on a pound with 240 pence.

⁷⁸⁵ Gillespie, *The Transformation of the Irish Economy 1550-1700*, p. 7.

other historians, often with disdain at the degree to which Ireland's medieval and early modern fisheries were in the hands of 'foreigners'.⁷⁸⁶ However, the question of who profited and who controlled the trade is not simple to answer. As the figures discussed earlier showed, a large portion of the fish trade from Ireland was carried out by vessels that were not based in Ireland. Unsurprisingly, English, and Welsh boats were heavily involved in the transport of fish to England and Wales. This does not mean that resident Irish fishers, wholesalers, or merchants did not profit from the trade at different stages in the supply chain though.⁷⁸⁷ Furthermore, we know that many Irish areas did not carry fish to market themselves, but instead profited through the taxation of fishing activity. Ultimately, the complexity of fish supply chains in sixteenth-century Ireland makes it difficult to determine who profited most from the industry. That said, we can certainly say that many residents of Ireland would have benefited from the fish trade, and equally would have been ruined by its collapse.

4.6.2 Irish Herring Prices

There is no comparable price series for fish in sixteenth-century Ireland. However, other historians have commented on the stability of Irish prices based on the scant evidence available in sources, like the corporation book of the Irishtown of Kilkenny.⁷⁸⁸ Unfortunately, that particular source is not useful for the detailed study of fish prices as it only contains prices for salmon and those show no movement at all.⁷⁸⁹ For this study, every mention of fish prices in the qualitative sources was collected and collated in the QFD in an attempt to construct a price series for fish products in Ireland. This exercise produced 42 records relating to fish prices, with 27 of these relating to herring. Of the herring prices found, 21 fell within the sixteenth century, and the majority of the data points were found in the Irish State Papers and Admiralty Court records. The herring prices are the only extensive series that was able to be collected for this study, so those will be the focus of this section. The first price point came from 1552 and the last in 1602.⁷⁹⁰ Several issues limit the reliability of the series established from these sources. Firstly, they deal with different units, mostly either barrels or individual pieces of fish. To

⁷⁸⁶ de Courcy, *Ireland's Sea Fisheries: a History*, p. 14.

⁷⁸⁷ In this instance 'Irish' does not refer to the Gaelic Irish, but any residents of Ireland.

⁷⁸⁸ Gillespie, *The Transformation of the Irish Economy 1550-1700*, p. 9.

⁷⁸⁹ John Ainsworth, "Economy and Society in Scotland and Ireland, 1500-1939", *Analecta Hibernica* 28 (1978).

⁷⁹⁰ The search for this analysis encompassed the period from 1500 to 1603, but no price points before 1552 were discovered.

overcome this, all the price points were converted to a standard value of pounds per barrel.⁷⁹¹ Secondly, all the prices are not from the same area, with some prices from Dublin, some Waterford, Wexford, and other price points reported as relating to Ireland as a whole. In terms of consistency, this regional variation is not ideal. However, on the other hand, it allows us to see regional differences in the prices that are interesting to note. The most serious problem with these price points is that most are not market values but are prices described within the English army purveyance records. The issue with this is that the English army could purvey, or purchase, goods at rates below market value. Many aspects of the purveyance system were informal, and the rate of discount they received was not fixed.⁷⁹² If they were, we could simply increase the army prices by the fixed amount to reflect the actual market value.

The same system of purveyance was used in England, and sellers there reported purveyors often purchased goods at less than half the market value. It was also sometimes stated that purveyors would record a higher price in their records than they had secured in reality. This practice would allow them to pocket the difference. The informality of the system and abuses by some purveyors made the system very unpopular in England.⁷⁹³ In Ireland, purveyance was part of a broader system of 'cess', or taxes, that supported the English army in Ireland and was also widely unpopular. The citizens of the Pale, in particular, felt that purveyance put an undue strain on them. Besides, soldiers' pay was often held up, meaning they could not purchase supplies legitimately and would often resort to confiscating food using force.⁷⁹⁴ The impact of confiscations on industries like fishing and agriculture is hard to quantify as this activity went unrecorded most of the time. However, it is crucial to keep these practices in mind; the increasing numbers of English troops in Ireland later in the sixteenth century put further pressure on food producers.⁷⁹⁵ Being forced to sell products far below their market value would have done damage to the bottom line of fishers and merchants.

While the rate at which the army purchased goods was not fixed by law, a record in the Irish State Papers from 1597 describes the differences between the then-current market value and the value at which the army purchased supplies.⁷⁹⁶ The document describes the price of 14 different commodities, including wheat, biscuit, beer, and herring. Within the document, the

⁷⁹¹ Pieces of fish were converted to a barrel price using the rate of 900 fish per barrel, (see Wallop to Burghley, 13 Jan 1583, SP 63/99 f.40, QFD 1025).

⁷⁹² C. S. L. Davies, "Provisions for Armies, 1509-50; A Study in the Effectiveness of Early Tudor", *The Economic History Review* 16 (1964), p. 237.

⁷⁹³ *Ibid.*, p. 237-238.

⁷⁹⁴ Steven G. Ellis, "Thomas Cromwell and Ireland, 1532-1540", *The Historical Journal* 23 (1980), p. 511.

⁷⁹⁵ The impact of conflict on the fishers will be discussed further in the Chapter 5.

⁷⁹⁶ The prices of victuals in Ireland, 4 Feb 1596-7, SP 63/197 f.237, QFD ID 1209.

market price is given first, and then the ‘rates that the soldiers do answer for’ are listed. The percentage decrease between the market value and purveyance value differs between every commodity.⁷⁹⁷ In the case of wheat, the army price was 44 per cent lower than the market value, while in the case of beer, the value difference was only 12 per cent. For a barrel of herring, the difference was 33 per cent, with the market value of one barrel being 28s. 8d., and the army purchasing price for the same being 20s.⁷⁹⁸ There is no way to know if this difference in price was applied to all army herring purchase in the sixteenth century as this was the only document found for this study that detailed the difference in prices.

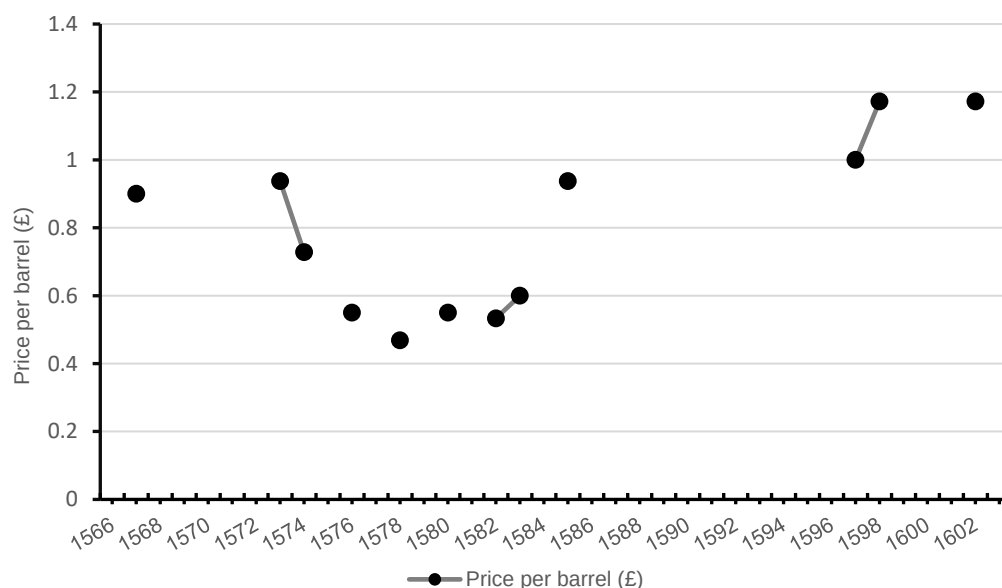


Figure 4.23 – Prices of herring barrels in Ireland, 1567-1602.

Figure 4.23 above shows the prices of herring barrels in Ireland per year. In years when multiple prices were available, the average price from that year was used. The lowest price in the series is £0.55, and the highest is £1.17. This relatively narrow range between which all the prices fall strengthens the reliability of the data. Had prices fluctuated more widely, we would be forced to question the accuracy of the figures. There was one further price from 1552 that was not displayed on the figure above. In that year, Lord Deputy Croft reported ‘the excessive prices of all things in Ireland’; at that point, a measure of wheat was worth 30s., while it had previously been 6s. 8d. He also reports that six herring cost 4d.⁷⁹⁹ If we assume there were 900 herring per barrel, then a whole barrel would cost £2.5 at that rate, more than twice the next highest price in the sixteenth century. This entry would suggest that Ireland did not entirely escape the

⁷⁹⁷ This is an incredibly detailed record and as well as different commodities the prices for different units are described also.

⁷⁹⁸ The prices of victuals in Ireland, 4 Feb 1596-7, SP 63/197 f.237, QFD ID 1209.

⁷⁹⁹ Lord Deputy Croft to the Marquis of Winchester, 22 Mar 1552, SP 61/4 f.87, QFD ID 604.

hyperinflation that impacted England over the same period. Because this price was so abnormally high, it was left off the graph.

The primary trend evident from this data is that prices decreased throughout the 1570s and early 1580s before reaching a high toward the end of the century. The rise in prices toward the end of the century could suggest there was a lack of supply. The data discussed throughout this chapter suggests there was a severe decrease in production from Irish fishers by the close of the century, so in this instance, the price rises do make sense. The following chapter will explore in greater detail the qualitative sources that outline how conflict damaged fishing and contributed to a dearth of fish in Ireland in the late sixteenth century. Additionally, the arrival of new commodities in the Irish market, such as cod from Newfoundland, could have influenced the price of herring in the late sixteenth century, as demand for herring fell. The trade data discussed earlier showed that, at least in part, Newfoundland fish replaced imports from Ireland as the sixteenth century progressed, and the same was true to some extent in the Irish market.⁸⁰⁰ This topic will be discussed further in Chapter 6.

There were regional differences in the prices, too. The average cost of a herring barrel in Dublin across the whole series was £0.70, while in Waterford it was £0.50, and Wexford, £0.45. As the trade data showed, Waterford and Wexford were significant exporters and producers of herring. Dublin did have local fisheries, but these do not seem to have been as productive. We would expect prices to be lower in towns that produce more fish, which is what the data indicates. A deposition in the Admiralty Court records from 1577 also highlights that quality impacted price. The deponent, William White, says that one barrel of herring was worth 10s in Waterford in that year, and 'the best sort of herring was worth not more than 12s'.⁸⁰¹ This report indicates that the production of herring in Ireland was not entirely uniform, and quality did matter when determining the price.

Lastly, Figure 4.24 on the following page compares the price of a barrel of herring in Ireland and English from 1566 to 1603. Irish and English prices are not entirely comparable, as there was a difference in the inherent value of the currency. An expenses list for the English army in 1577 notes '£5,000 sterling makes £6,666 13s 4d Irish', meaning Irish pound was worth 1.33 to the English pound at that time.⁸⁰² Unfortunately, we do not have enough data to calculate the value difference across the whole series. However, despite this, they are still useful to compare to one another to see how the overall trends match up. At the start of the period, Irish

⁸⁰⁰ This will be further discussed in Chapter 6.

⁸⁰¹ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 209, p. 41. QFD ID 648 & 649.

⁸⁰² O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 851.2, p. 522, QFD ID 701.

and English prices are similar, but they diverge in the 1570s as Irish prices decrease and English prices remain stable. It is possible that turmoil in Munster during the Desmond Rebellions of the 1570s shocked the herring market and caused this divergence in price.⁸⁰³ Toward the end of the century, both price series see a similar increase.

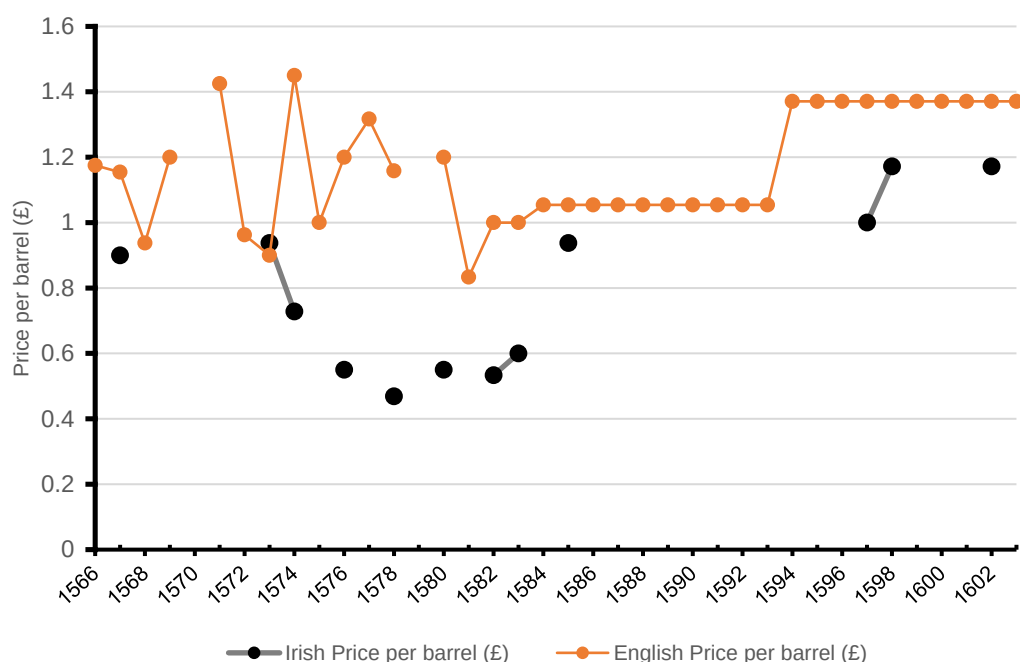


Figure 4.24 – Irish and English herring prices compared, 1566-1603.

It is encouraging that both series show relatively similar trends across the period, indicating that the collection of scattered price points from a selection of sources is a legitimate method to generate a limited price series. In contrast, in his work on prices from the corporation books of the Irishtown of Kilkenny, Raymond Gillespie wrote that Irish prices show ‘little movement during the late sixteenth century’.⁸⁰⁴ The data collected here reveals that Irish herring prices did experience movement in the late sixteenth century and at a similar level to English prices. Across the whole series, Irish prices were lower than those in England, which may have in part motivated the export of fish to England. It would have been in merchants’ and fishers’ interests to sell in a market with better rates, but unfortunately, we lack the data to test this hypothesis when fish exports were at their peak in the late fifteenth and early sixteenth centuries.

⁸⁰³ My thanks to Al Mathews from the NorFish team for his advice on the impact on conflict on fish prices. For more on this topic see, Mathews, “European Fish Market Dynamics from 1500 to 1800”.

⁸⁰⁴ Gillespie, *The Transformation of the Irish Economy 1550-1700*, p. 9.

4.7 The Total Scale of Exports, the Seventeenth-Century Perspective

None of the available fifteenth or sixteenth-century data discussed thus far captures the total extent of Irish fish exports. However, data that does illustrate the complete picture of Irish trade is available only 16 years into the seventeenth century. The data utilized in this section was compiled by David Dickson and Donald Woodward and published in 1999.⁸⁰⁵ The first year covered by the data is 1616/7, the next available year is 1621/2, then 1626 and finally 1640/1.⁸⁰⁶ The figures for every commodity were added to the FTD, but this section will only look at the scale of fish exports.⁸⁰⁷ While this study is focused on the sixteenth century, this seventeenth-century data does provide a useful comparison to the earlier figures and allows us to establish a quantitative estimate of what total exports looked like in the early modern period.

The earliest extant Irish port books are also found in this period. These cover Ulster for the years 1612 to 1615.⁸⁰⁸ These were briefly mentioned earlier in the context of salmon exports but will not be discussed in detail here due to the small geographical area they cover. However, they are still a valuable source deserving of further exploration in the future.

In the early seventeenth century, the Irish customs system was reformed in an attempt to generate more income from foreign trade - these reforms led to the Irish customs being farmed out to a series of English syndicates.⁸⁰⁹ To track the extent to which their investment was performing, these syndicates commissioned statistical series on the volume of trade in Ireland that provide us with the figures under discussion here. Figure 4.25 indicates the TLW of fish exports from Ireland as described in the seventeenth-century customs statistics.⁸¹⁰ The data also lists the departure port of exports, so the spatial distribution is indicated on Map 4.2 on page 208. However, the destination was not recorded, so we do not know where shipments of fish went to in this period.

⁸⁰⁵ The primary author is Woodward, but he acknowledges the help of David Dickson in compiling the data, Woodward, "Irish Trade and Customs Statistics, 1614-1641", p. 54.

⁸⁰⁶ Data for this section is taken from *ibid.*, Appendix VIIIa & VIIb, Irish Exports for 1616-17, by Port, pp. 67-68; Appendix IXa & IXb, Irish Exports for 1621-2, by Port, pp. 69-70; Appendix, Xa,Xb,Xc, Irish Exports for 1626, pp. 71-7; Appendix XI, Irish Exports from 1640-1, pp. 74-75.

⁸⁰⁷ See Appendix 3 of the data appendices for more, hosted online at <http://hdl.handle.net/2262/96098>.

⁸⁰⁸ Hunter and Scott, *The Ulster Port Books, 1612-15*, while these records provide some fascinating insights, they could not be included in this study due to word count and relevancy.

⁸⁰⁹ Woodward, "Irish Trade and Customs Statistics, 1614-1641", p. 54; Victor Treadwell, "The Establishment of the Farm of the Irish Customs 1603-13", *English Historical Review* 93 (1978).

⁸¹⁰ Any miscalculations present in the originals have been corrected here.

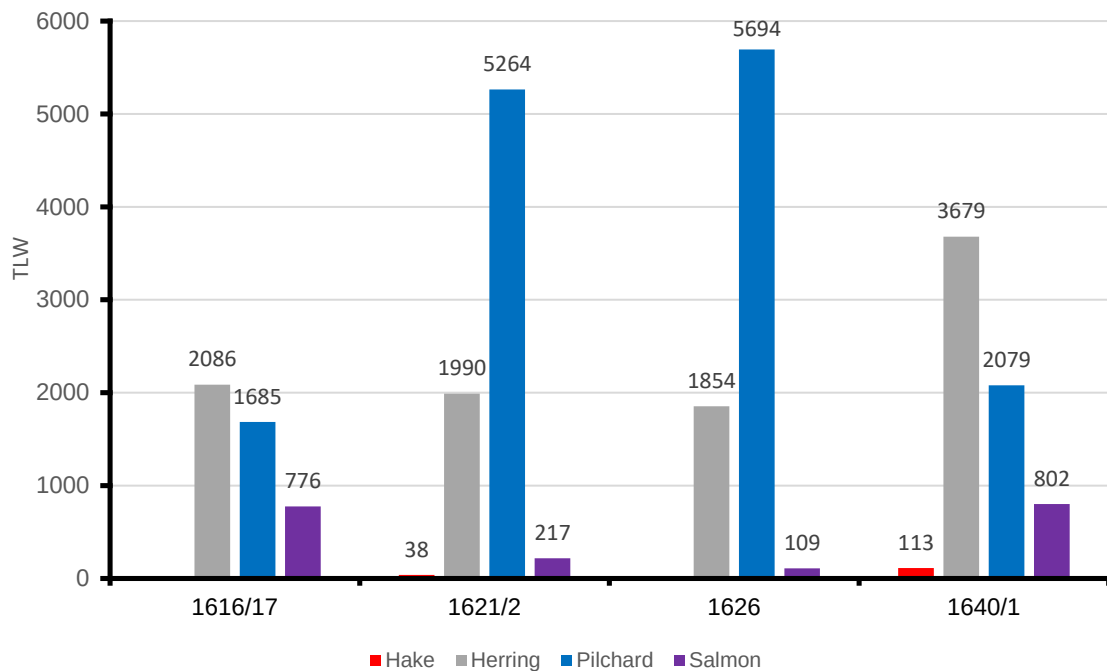


Figure 4.25 – Fish exports from Ireland, 1616-1641.

The data shows that most exported species in this period were pilchards, with a total of 14,722 TLW recorded in the data. As shown earlier, herring were the most dominant species throughout most of the fifteenth and sixteenth centuries, while pilchards appeared only in small amounts. Herring and pilchards are both small oily, pelagic fish and roughly fill the same ecological and human dietary niche.⁸¹¹ Pilchards are a mature form of sardines and are also in the same family as herring (Clupeidae).⁸¹² Pilchards are generally found in warmer waters, but when the climate is right, they can flourish on the Irish south and west coasts.⁸¹³ Herring and pilchards have also been shown to alternate in abundance on the south coast of England due to longer-term cycles in the climate.⁸¹⁴ While no study has specifically studied this phenomenon in Irish waters, a similar pattern of alternation certainly does occur in Ireland.⁸¹⁵

⁸¹¹ Heessen, Daan, and Ellis, *Fish Atlas of the Celtic Sea, North Sea, and Baltic Sea*, p. 139.

⁸¹² Downey and Stuijts, "Historical Fisheries: Irish Pilchard Fishery and Historical Fish Harvesting and Processing Methods, Fish Products and Consumption", p. 9.

⁸¹³ Ibid.; Southward, Boalch, and Maddock, "Fluctuations in the Herring and Pilchard Fisheries of Devon and Cornwall Linked to Change in Climate Since the 16th Century".

⁸¹⁴ N. C. Stenseth et al., *Marine Ecosystems and Climate Variation: The North Atlantic - A Comparative Perspective* (Oxford: Oxford University Press, 2005), p. 92.

⁸¹⁵ This phenomenon will be discussed further in Chapter 6.



Map 4.2 – Export of Fish from Ireland by species and port, 1616-1641.

The seventeenth-century data shows that pilchards experienced periods of boom and then decline, with exports spiking in the 1620s before dropping again in 1640/1. If we look at Map 4.2 on preceding page, we see pilchards were heavily exported from the south-east ports, with further exports coming from Galway and the Irish west coast.⁸¹⁶ Many of the most significant pilchard fishing sites in the seventeenth century, such as Baltimore, had previously been Gaelic Irish strongholds but had subsequently been taken over and exploited by English settlers.⁸¹⁷ The current study will not go into detail about this topic, but the pilchard catches best represents the changing pattern of Irish fisheries in the seventeenth century, both ecologically and politically.

For the first three decades of the seventeenth century, herring was relegated to the second most important species, but by 1640/1, the boom of pilchards had declined, and herring was once again the largest export. Map 4.2 shows herring exports from places that did not feature heavily in the earlier data, such as Killybegs, Galway and Carrickfergus. The overall pattern remains broadly similar, with ports in the south-east, such as Wexford, remaining paramount in the seventeenth-century herring trade. In total, 9,609 TLW of herring was exported in the four years recorded, with the highest export - 3,679 TLW - happening in 1640/1. Comparably, the year in the sixteenth century with the highest exports was 1525/6, with 1,092 TLW leaving Ireland. However, the earlier data was only collected from a small selection of English ports so that the real total export would have been higher. Overall, without consistent data across the centuries, it is not easy to know if the herring industry grew or declined over the period. At the very least, the figure from 1640/1 provides some indication of what the full scale of herring exports from the early modern period could have been.

In the seventeenth century, the importance of hake seems to have significantly declined, with only minuscule amounts being exported. In the earlier data, hake was regularly the second most important species, and sometimes the most important. Given the increasing importance of Newfoundland fish in the seventeenth century, it seems likely that cod from the New World largely replaced hake in the export market by this period.⁸¹⁸ There may have also been a

⁸¹⁶ Most of the exports had an exact port described but some were generically described as the 'West of Ireland', Woodward, "Irish Trade and Customs Statistics, 1614-1641".

⁸¹⁷ For more see, Went, "The Irish Pilchard Fishery"; "Pilchards in the South of Ireland"; additional information on the slightly later period can also be found in, David Dickson, *Old World Colony: Cork and South Munster 1630-1830* (Cork: Cork University Press, 2005).

⁸¹⁸ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

climatic link to the decline of hake; however, that assertion would need further study to substantiate fully.⁸¹⁹

Salmon also remains a small but important trade in the seventeenth-century data. The pattern apparent in Map 4.2 shows that salmon was exported from a wide variety of ports around the Irish coast in the period. The strong export of salmon from Ulster was related to the newly imposed Ulster Plantation. As mentioned, Ulster Port Books that run from 1612-15 further illustrate this trade.⁸²⁰

It is difficult to judge the importance of goods based on quantity alone. Still, it appears evident from seventeenth-century data that fish was not among the most valuable Irish exports. Conversely, the data from this period shows that hundreds of millions of empty wooden barrels, hogsheads and pipe staves were exported from Ireland. Additionally, hundreds of thousands of hides and pounds of wool were shipped. Tallow was another major export in this period with 99,2001 lbs exported across all the accounts.⁸²¹ In short, in the seventeenth century, fish was superseded by timber, hides, wool and tallow as the most crucial product exported from Ireland. However, the data also indicates that the fishing industry had recovered from the near-total collapse experienced in the late sixteenth century. Other species, such as pilchards, were significant to local economies in Munster and elsewhere, and traditional species like herring had a resurgence and continued to be extracted by fishers in large numbers.⁸²²

The year with the total highest combined exports was 1625/6 in which 7,657 TLW of fish was exported. The full figure would have been higher if we could factor in domestic consumption. Even if we assume domestic consumption would increase this total twofold, these figures would still not place Ireland among the top fish producers in the North Atlantic zone at this time.⁸²³ Despite this, the numbers still represent a significant extraction of fish, and evidently, fishing was an essential economic activity in specific locations. The data also highlights that, in the seventeenth century, fish was no longer the primary export from Ireland, as many other products had superseded it.

⁸¹⁹ Hakes have been observed to rise in abundance with warmer waters, see Korta et al., "European Hake (*Merluccius merluccius*) in the Northeast Atlantic Ocean", p. 16.

⁸²⁰ Hunter and Scott, *The Ulster Port Books, 1612-15*.

⁸²¹ All the figures referenced here are calculated from data in the FTD.

⁸²² For more on the significance of the seventeenth century pilchard fisheries in Munster see, Dickson, *Old World Colony: Cork and South Munster 1630-1830*.

⁸²³ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

4.8 Conclusion

Wendy Childs wrote that 'there has been rather too pessimistic an assessment of the available quantitative evidence' concerning Irish trade.⁸²⁴ This chapter has shown that there is sufficient quantitative data to trace the significant ups and downs of Ireland's export of fish from the fifteenth to seventeenth centuries. There are substantial gaps in the available sources, but overall, the data used here captures the pattern of trade to some of Ireland's key partners. Our strongest evidence comes from Ireland's trade with England and Wales, while the extent of the fish trade with Scotland and continental Europe remains mostly unknown. Out of these regions, the most comprehensive data comes from England, which was the principal importer of Irish fish. So, while we do not possess data for every country, the fact England was the primary importer means that the data we do have is very indicative of the overall fluctuations in Ireland's fish exports. The sum of all the available evidence here suggests that the continental trade was inferior to the trade with England in this period. However, the picture of trade described here may be amended in the future should historians uncover new archival material.

This analysis has highlighted that the exportation of fish comprised a vital part of the Irish fishing industry and economy in the fifteenth and sixteenth centuries and represented a significant total monetary value. It has also been shown that this export trade reached a peak in the late fifteenth and early sixteenth centuries, began to decline from the middle of the sixteenth and virtually ceased by 1603. The early seventeenth century saw a resurgence in fish exports, but also marked the end of fish as Ireland's premier export commodity.

Finally, economic historians to date have not fully considered or understood the significance of fish to the Irish economy in the period studied here. Fishing was an essential economic activity, and an understanding of the fisheries and its associated trade is necessary to answer broader questions about Ireland's early modern economy. The next chapter will focus on how violence and conflict impacted fisheries in sixteenth-century Ireland and how this contributed to the decline observed in the quantitative data.

⁸²⁴ Childs, "Ireland's Trade with England in the Later Middle Ages", p. 1.

Chapter 5 – The Impact of War and Piracy on Fisheries

“I wish that Ireland were a fishpool, for this age shall never see it settled in peace...”

George Carew to Robert Cecil, 28 June 1602.⁸²⁵

5.1 Introduction

This chapter explores the impact war and piracy had on fisheries in sixteenth-century Ireland. The first section will focus on terrestrial conflicts and will examine how these conflicts damaged fishing infrastructure, impaired fishing fleets and had the indirect consequence of deterring fishers and merchants from doing business. This section will not attempt to catalogue every conflict in sixteenth-century Ireland. It will instead focus on the most significant conflicts: those that had the greatest impact on fisheries and those for which the most source material is available to assist our understanding of that impact. The major conflicts covered here are the Kildare Rebellion of 1534, the First and Second Desmond Rebellions, the sailing of the Spanish Armada and the Nine Years War.

The Tudor re-conquest of Ireland motivated much of the conflict that prevailed in sixteenth-century Ireland. Fisheries were not only incidentally impacted and damaged by these conflicts but also played a role in the motivation and practicalities of those conflicts. The writings of English authors and officials will also be examined to understand how they viewed and perceived Irish fisheries in the sixteenth century. This section will consider how the English planned to include fisheries in their military campaigns and profit from them in plantation schemes. Fisheries were often strategically important; they could feed garrisons, and fishing resources could also be denied to the enemy in an attempt to use starvation as a weapon. Fishers themselves had vital knowledge of coastlines that made them valuable to naval and terrestrial forces alike. In these respects, fisheries were often critical to warfare and played an important role in English interactions with Ireland.

The evidence for this chapter is all qualitative and almost entirely written from the English perspective. Because of this, establishing the precise social and economic impact of conflict

⁸²⁵ J. S. Brewer and William Bullen, eds., *Cal. Car. MSS, Vol. 4, 1601-1603* (London: Longmans, Green, & Co., 1870), no. 255, p. 258, QFD ID 847.

on all parts of Irish society is challenging. Most critically, we are missing sources from those who were most often the victims of the violence, the Gaelic Irish.⁸²⁶ It is clear that conflict and its aftermath impacted groups in Ireland differently; the Gaelic Irish fisheries experienced a different trajectory of change to those controlled by Old English towns. Those distinctions are important, and despite the inherent bias in the sources, they will be considered throughout the chapter.

The second part of this chapter will consider more closely the impact of piracy on fisheries. As the English expanded their control in Ireland, the island became increasingly involved in the broader geopolitical conflicts of Europe. This involvement in European wars led in turn to a marked increase in the number of piracy incidents impacting Irish water and vessels. This section will use QDA methods to trace the rise in piracy in Ireland toward the end of the sixteenth century using the records of the English High Court of the Admiralty. These records and others from the State Papers will be further utilized to understand the unique impact piracy had on maritime activities like fisheries and how it additionally hindered fisheries in Ireland. Ultimately this chapter is concerned with the direct impact violence had on Irish fisheries in the sixteenth century. While we cannot understand or quantify every aspect of how war and piracy affected fisheries, we can gauge how violence constrained fisheries and limited the potential of the industry to grow and prosper in sixteenth-century Ireland.

5.2 The Impact of Conflict on Fisheries

In the late fifteenth century, Ireland was a border region of English authority and saw constant low-intensity conflict between the English and Irish and also fighting between independent Irish lords. There were, however, no large-scale conflicts, mainly because the power of the Earl of Kildare kept a balance between competing forces in Ireland. The FitzGeralds of Kildare were the most prominent Irish aristocratic family in the period from 1470 to 1534.⁸²⁷ They maintained their power and largely kept the peace by projecting influence and power in both the English and Gaelic political spheres. They operated in both political systems, acting as a dominating and mediating force between them. However, even during periods of peace, there was an

⁸²⁶ Anthony M. McCormack, "The Social and Economic Consequences of the Desmond Rebellion of 1579-83", *Irish Historical Studies* 34 (2004), p. 1.

⁸²⁷ Christopher Maginn, "Continuity and Change: 1470–1550", in *The Cambridge History of Ireland: Volume 1: 600–1550*, ed. Brendan Smith (Cambridge: Cambridge University Press, 2018), pp. 305-306.

underlying tension between the many competing factions in Ireland.⁸²⁸ Ultimately, the sixteenth century would show that it was only a matter of time before these factions engaged in open warfare.

Most conflicts in the fifteenth and early sixteenth centuries did not dramatically change the territorial control of Ireland, nor were the rights to fishing resources contested regularly. For the most part, the control of coastlines and fisheries remained stable over this period. This meant that while conflicts took place, there were no monumental shifts in how fisheries operated. This period of relative peace meant that fisheries went mostly undisturbed and, as the previous chapter showed, fish rose to be the most important export commodity from Ireland in this period. Moreover, Ireland had yet to be drawn into geopolitical conflicts between the major powers of Europe. For the most part, Ireland was still neutral ground for Spanish and French fishers, English fishers too could operate in Ireland, so long as they all paid their dues. The greatest threat to visiting fishers in Ireland in the fifteenth and early sixteenth centuries were the landowners who controlled the coast and exacted taxes in exchange for protection.

The difference between earlier conflicts in Ireland and conflict in the late sixteenth century was the extent these wars impacted the population and the ownership of fisheries. The efforts of the Tudor State to bring the whole of Ireland under their control would change the possession and operations of fisheries in Ireland forever, and the English achieved this with ever-increasing levels of violence. As T. W. Moody writes, 'from at least 1500 onwards there was a growing violence, a spreading anarchy in Irish society, with signs in a number of areas of an increasing and general economic breakdown'.⁸²⁹

5.2.1 The 1534 Rebellion

The 1534 Rebellion was one of the first significant conflicts in sixteenth-century Ireland. It began in June 1534 when Thomas FitzGerald, later the 10th Earl of Kildare, entered into open rebellion against Henry VIII.⁸³⁰ The revolt marked the end of the Kildare ascendancy in Ireland and ultimately led to the Tudor re-conquest of Ireland. That conquest was not a cohesive military campaign but rather the slow breakdown of the relationship between the English government and Ireland's native inhabitants. The power of Kildare had maintained the status quo in Ireland

⁸²⁸ James Lydon, "The Middle Nation", in *Government, War and Society in Medieval Ireland: Essays by Edmund Curtis, A. J. Otway-Ruthven and James Lydon*, ed. Peter Crooks (Dublin: Four Courts Press, 2019), p. 347.

⁸²⁹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 4.

⁸³⁰ The 10th Earl is popularly known as Silken Thomas.

and allowed the major political groupings to, for the most part, co-exist and co-operate in their fisheries. However, after the downfall of Kildare conflict between the major political groupings in Ireland would only increase.⁸³¹

The current study will not discuss all the reasons that motivated the Kildare Rebellion or other conflicts, but it is essential to note that the rebellion was partly driven by a growing divide between the old ruling elite in Ireland and the new Tudor regime in England. Henry VIII was a protestant king and was determined to increase his control over the kingdom. Henry's religious and political reforms threatened the position of Kildare and the other powerful Old English families as the dominant political force in Ireland.⁸³² The religious and political divides that emerged in the sixteenth century are relevant to fisheries because they motivated a series of conflicts that would severely disrupt fisheries and ultimately cause the control of those fisheries to change hands. Furthermore, as we will see, English policy in Ireland became increasingly geared toward possessing and exploiting natural resources like fisheries for profit as the century progressed.

As discussed earlier in Chapter 2, Kildare controlled vast amounts of land, including several significant fishing locations. However, all these lands were confiscated after the failed rebellion. In Ulster, the Earl owned Ardglass, Strangford and Carlingford, all valuable fishing towns. In the years following the rebellion, only Ardglass continued to pay any rent to the Crown. Carlingford, on the other hand, generated no income in 1534, 'as the manner remained waste during that time and no ship loaded or discharged at the port by reason of the war'.⁸³³ The immediate impact of the war was temporary, as we know there were 600 English fishing boats at the town in 1535.⁸³⁴ However, following the rebellion, the town became increasingly militarized as the English sought to defend it against the Gaelic Irish.⁸³⁵

5.2.2 Tudor Reform in Ireland

Establishing the extent of damage inflicted on fisheries during the 1534 Rebellion is difficult due to a lack of sources. However, after the rebellion, King Henry began a series of reforms in Ireland, including making himself head of the Irish church and later, King of Ireland in 1541.⁸³⁶

⁸³¹ Ciaran Brady, *The Chief Governors: The Rise and Fall of Reform Government in Tudor Ireland 1536-1588* (Cambridge: Cambridge University Press, 1994), p. 1.

⁸³² Maginn, "Continuity and Change: 1470–1550", p. 320.

⁸³³ Quinn, "Anglo-Irish in Ulster In the Early Sixteenth Century", p. 65.

⁸³⁴ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, p. 85, no. 70. QFD ID 769.

⁸³⁵ Simms et al., "Carlingford", p. 3.

⁸³⁶ Maginn, "Continuity and Change: 1470–1550", p. 321.

Then in the late 1530s and early 1540s, Henry and his government moved to dissolve the Irish monastic houses and seize their land and wealth.⁸³⁷ In preparation for this, a survey of all the monastic possessions was conducted. The records of this survey tell us that religious houses controlled many fishing sites across Ireland, with salmon and eel weirs being the most common.⁸³⁸ While these resources were not damaged in the possessions, their confiscation and redistribution must have caused disruption to the normal operations of the fisheries. We cannot say what percentage of weirs were in monastic hands, but the trade data discussed in the previous chapter showed a dramatic drop in salmon exports in 1542/3, suggesting that the possessions did impact supplies during that period.

There are not as many cases of the monasteries controlling sea fisheries, but there are some examples in the survey, and several more were discussed in previous chapters. For example, in the early 1540s, the Dominican monastery at Carlingford was dissolved, and the monastery's church was subsequently used as 'accommodation of those who resort to the place in large numbers with the fleet of ships every year to catch herrings'.⁸³⁹ Another survey of crown lands taken in 1540-1 reported that Carlingford's fishery was 'necessary in order for the defence of the country'.⁸⁴⁰ The survey indicated that the town's castle was still in a state of disrepair and the Gaelic Irish O'Hanlons and Magennis were threatening the inhabitants. The O'Hanlons were vassals of O'Neill but had previously had a close relationship with the Earls of Kildare.⁸⁴¹ The survey illustrates that while fishing was still taking place Carlingford, the town was now an isolated English outpost, surrounded by hostile Irish. The power of Kildare had previously protected it, but those old relationships had been removed and replaced with suspicious and hostile attitudes between the English and Irish.

From the 1540s onward, there was increasing interest among English politicians, writers and adventurers regarding reforming and settling Ireland. The dissolution of the monasteries was part of those reforms, but it was only the beginning. There existed English plans for improving and settling Ireland before 1534, but after the rebellion, the number of these schemes for 'civilising' Ireland increased markedly.⁸⁴² Fisheries were often part of these plans. For example,

⁸³⁷ Brendan Bradshaw, *The Dissolution of the Religious Orders in Ireland Under Henry VIII* (Cambridge: Cambridge University Press, 1974).

⁸³⁸ White, *Extents of Irish Monastic Possessions, 1540-1541, from Manuscripts in the Public Record Office, London*.

⁸³⁹ *Ibid.*, p. 246.

⁸⁴⁰ Gearóid Mac Niocaill, ed. *Crown Survey of Lands 1540-41 with the Kildare Rental Begun in 1518*, pp. 75-76. This has been translated from the original Latin.

⁸⁴¹ Moody, Martin, and Byrne, *A New History of Ireland*, p. 16.

⁸⁴² For example, Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 8, p. 2, no. 79, p. 31 & no. 80, p. 34.

in 1541 Robert Crowley wrote the 'devise for the reformation of Ireland', in which he argued Ireland should be shired in the fashion of Wales and England. He contended this would make the galloglass and kerne 'forsake idleness, and take to tillage, mining and fishing'.⁸⁴³ In Crowley's case, fisheries are not considered in detail but are instead included in a list of the natural resources that the Irish were not making full use of. Crowley's tract was propaganda, intent on encouraging the English authorities and investors to extend their influence in Ireland and make use of these resources. Tracts like these formed part of a broader cultural justification for plantation taken up by English writers and thinkers who espoused the same view that the Gaelic Irish were a barbarous and 'primitive' people who required civilising.⁸⁴⁴

5.2.3 The English Response to Foreign Fisheries

As outlined in detail in Chapter 3, visiting fishers were an essential part of the maritime economy in the early sixteenth century, and many Gaelic Irish and Old English areas had complex systems to tax and facilitate these operations. English fisheries regularly visited Ireland too, but the English authorities were always wary of the interaction between continental fishers and the Gaelic Irish. From at least 1465, attempts had been made to introduce licences to regulate foreign vessels.⁸⁴⁵ However, the concern with these foreign fishers became even more significant after 1534. In 1535 an article was proposed in the Irish Parliament that stated, 'the fishing of Ireland is a great commodity which strangers haunt and carry away into Spain, France and Scotland'. It further specified that no ship could leave the country before first paying customs duties.⁸⁴⁶

There were several reasons why the English authorities wanted to limit and control profits from foreign fishers in Ireland in this period. The rebellion in 1534 had shown the English they were vulnerable in Ireland and increased their mistrust of not only the Gaelic Irish but also the Old English. For example, the Earl of Kildare had previously controlled several foreign fishing locations, so legislation like this would limit the profits other potential English enemies could gain from fisheries. In 1541, the reforming Parliament in Dublin passed legislation that ordered foreign fishers to pay tithes of fish in the parishes in which they operated during the fishing

⁸⁴³ Ibid., no. 587.1, p. 325, QFD ID 754.

⁸⁴⁴ For more on this see, Annaleigh Margey, "Plantations, 1550-1641" in *The Cambridge History of Ireland, Volume 2: 1550-1730*, ed. Jane Ohlmeyer and Thomas Bartlett (Cambridge: Cambridge University Press, 2018), pp. 559-561; Ian Campbell, "Irish Political Thought and Intellectual History, 1550-1730", Ibid, pp. 506-528; William Palmer, "The Problem of Ideology in the Elizabethan Conquest of Ireland: A Comparative Approach?", *New Hibernia Review* 19, no. 3 (2015).

⁸⁴⁵ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 117, p. 62, QFD ID 612.

⁸⁴⁶ Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 119.3, p. 56, QFD ID 746.

season.⁸⁴⁷ The English authorities were concerned with capturing the profits from these operations and denying them to potential enemies. However, at this point in the mid-sixteenth century, there was no talk of forcefully conquering territory for the purpose of exploiting the fisheries. That would change as the century progressed.

Conflict with other European powers also motivated the desire to limit these operations during the 1540s. In 1543 St Leger wrote a letter to King Henry, in which he states, 'There has long been a bruit of war with the Scots and Frenchmen', and that he is concerned about protecting Ireland against invasion.⁸⁴⁸ In response to the threat of the war, he dispatched a ship to O'Donnell territory to report on any French ships there. As the letter shows, around this time there was a real fear among the English authorities of a French sponsored invasion of Ireland to restore the Earls of Kildare to power. St Leger goes on to say the Irish in Munster are receiving supplies and arms through the trade of hides with foreign merchants. He does not explicitly say foreign fishers were bringing in arms but tells the king that the fisheries at Baltimore would be beneficial for the Crown to possess, although this could not happen 'without some war on those who possess it'.⁸⁴⁹

The French invasion never came, but later in January 1551 specific plans for capturing Gaelic fisheries at Baltimore, as well as Berehaven, were proposed.⁸⁵⁰ The plans were conceived with the threat of a French or Scottish invasion in mind, but they were also clearly motivated by greed. The scheme, penned by an unknown author, stated that Baltimore and Berehaven were the principal harbours in the south-east of Ireland. The plan was that six ships with mariners, soldiers, and settlers would reach the towns in April that year and take control. In order to exploit the fisheries there, 'fishermen with fishing nets should be set up'.⁸⁵¹ It suggested the settlers should be recruited from Cornwall and Devon; this is not surprising given the well-established relationship between west country fishers and Ireland, as discussed in Chapter 3.⁸⁵²

The plan concludes by stating that the Lord Deputy should agree with the Earl of Desmond and MacCarthy Mór that their ports should come under royal control 'to prevent the Spanish

⁸⁴⁷ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 157, p. 182, QFD ID 771.

⁸⁴⁸ Steven and Murray, *C.S.P. Ire., Tudor period 1509-1547*, no. 627, pp. 349-350, QFD ID 757. This letter was mentioned earlier in Chapter 3 because it references Breton ships in Ireland and the presence of foreign fishes in Baltimore.

⁸⁴⁹ *Ibid.* no. 627, pp. 349-350, QFD ID 757. At that time O'Driscoll's were lords of Baltimore and they were vassals of the MacCarthy Reagh.

⁸⁵⁰ Colm Lennon, ed. *C.S.P. Ire., Tudor Period 1547-1553* (Dublin: Irish Manuscripts Commission, 2015), no. 250, p. 99, QFD ID 598.

⁸⁵¹ *Ibid.*, no. 250, p. 99, QFD ID 598.

⁸⁵² See too Kowaleski, "The Expansion of the South-Western Fisheries in Late Medieval England".

plundering the fisheries of the King's subjects there and in England'.⁸⁵³ Letters from later in May 1551 mention several times that the Spanish were 'mistreating the royal subjects at Baltimore'.⁸⁵⁴ By August, King Edward wrote to Deputy Croft to admonish him for not having the fortifications at Baltimore finished already. He was instructed 'to have the site ready for trench-digging and building before the Spaniards arrive for the next fishing season'.⁸⁵⁵ The letters make it clear that the English were as much concerned with disrupting Spanish operations, as they were with protecting their own fishing interests in the area.⁸⁵⁶ The second half of the plans included similar strategies for capturing Olderfleet and the Bann 'where there is much fishing'.⁸⁵⁷ In all cases, the authors also hoped that the fishing at these locations would help fund the troops and forts that were necessary to keep hold of them.

This memo highlights that there had been a change in the English attitude toward Gaelic Irish fisheries. The relationship between the English, Gaelic Irish and Old English that had facilitated foreign fishing operations were breaking down from the middle of the sixteenth century onwards. Further evidence for this is illustrated by the attack on Baltimore by the Waterford fleet in 1537, in which they destroyed the O'Driscoll castle and wrecked the clans' fleet of boats.⁸⁵⁸ As discussed in Chapter 3, earlier in the sixteenth century, Baltimore and Kinsale had jointly elected an admiral to administer the fisheries. By 1537 Waterford had sacked Baltimore, and in 1551 the English were seriously considering a full invasion. As we will see, this escalating violence and acceptance of conquest would transform fisheries in Munster.

5.2.4 Shane O'Neill and the Enterprise for Ulster

When Queen Elizabeth I ascended to the English throne in 1558, the question of what to do with Ireland remained unanswered by English administrators. Most of the country was at peace in 1558, but the province of Ulster remained extremely problematic.⁸⁵⁹ Shane O'Neill was the most powerful Irish lord in Ulster at that time and was actively involved in Scottish politics; the

⁸⁵³ Lennon, *C.S.P. Ire., Tudor Period 1547-1553*, no. 250, p. 99, QFD ID 598.

⁸⁵⁴ *Ibid.*, no. 271, p. 108 & no. 275, p. 111.

⁸⁵⁵ *Ibid.*, no. 296, p. 126, QFD ID 602.

⁸⁵⁶ In other entries the stated aim of the expedition was defense, but the entries discussed above make it clear there were other aims, *ibid.*, no. 286, p. 118, QFD ID 609.

⁸⁵⁷ *Ibid.*, no. 250, p. 99, QFD ID 598.

⁸⁵⁸ This raid was discussed in more detail in Chapter 3, Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, pp. 349-350, no. 627, QFD ID 757.

⁸⁵⁹ G. A. Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", in *A New History of Ireland. 3, Early Modern Ireland, 1534-1691*, ed. T. W. Moody, F. X. Martin, and F. J. Byrne (Oxford: Oxford University Press, 1976), p. 83.

English also suspected he was working with the French against them.⁸⁶⁰ This context is important because the English state and Shane were both seeking to control Ulster, and this led to a marked increase of conflict in the region. During the 1560s, the subsequent English invasion of Ulster ended in disaster, and all efforts to end the conflict peacefully came to nothing. However, in 1567 Shane was defeated in battle by the O'Donnells and soon after the Scots murdered him at Cushendun.⁸⁶¹ These tumultuous events would have caused severe disruption to the regular operation of fisheries in this period, but more consequently, the unrest motivated the English to plan plantations in Ulster that would ultimately change the whole seascape of the province.

The first substantial English plantations in Leix and Offaly were already begun in the 1550s in the reign of Queen Mary.⁸⁶² These had little impact on fisheries as they were both inland counties and had no major fishing rivers. The state had sponsored the plantation in Leix and Offaly, and while ostensibly a success, they were wildly expensive and made no profit. The English regime, faced with new financial constraints, turned to private enterprises to establish new plantations in Ulster. Additionally, it was hoped methods for plantation first trialled in Ireland could be extended to the Americas in the future.⁸⁶³ Under these new circumstances, profit became a key motivation and goal for plantations in Ireland, and fisheries were often a vital part of that profit-making.⁸⁶⁴

In the wake of Shane O'Neill's death, proposals for the first of these plantations were made for Ulster. Many of these schemes focused on the River Bann. The river had long been the site of conflict between rival Gaelic and Scottish clans, several examples of which were discussed in Chapter 3. Shane had held a firm grip over the river, using it as a bargaining chip in his negotiations with the English in 1564, however, after his death, it became a prime target for English planters.⁸⁶⁵ For example, in 1566, Valentine Browne and merchants from Bristol were competing for the right to plant settlers in Ulster and take over 'the Bann fisheries and other waters'.⁸⁶⁶ Lord Deputy Sidney favoured Browne for the task.⁸⁶⁷

⁸⁶⁰ Ibid., p. 80.

⁸⁶¹ Ibid., p. 86.

⁸⁶² Ibid., p. 78.

⁸⁶³ Margey, "Plantations, 1550-1641", p. 565.

⁸⁶⁴ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", p. 95.

⁸⁶⁵ Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 1: 1509-1573* (London: Longman, Green, Longman, & Roberts, 1860), no. 1, p. 237, QFD ID 1579.

⁸⁶⁶ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 292, p. 132, QFD ID 615.

⁸⁶⁷ A letter in April 1567 gave Sidney permission to lease the fishery, see *ibid.*, no. 394, p. 169, QFD ID 624 and in June 1567 it was reported two offers had been made for the fishery, *ibid.*, no. 444, p. 188, QFD ID 628.

However, these proposed plantations on the Bann did not take place straight away. Then in July 1567, Sir Francis Knolly gave his opinion that English 'artisans and sea fishers' should be planted on the Bann and at Strangford, 'so that after they may grow to be haven towns'.⁸⁶⁸ Sidney made his opinion known in the same month when he wrote that forts should be constructed in 'Coleraine, Castle Toome, Massereene, Newry and Strangford' and 'those who receive the fishing of the Bann are to maintain these forts'.⁸⁶⁹ In this way, the plan was very similar to those proposed for Baltimore and Berehaven; the fisheries would fund the defences required to hold the newly acquired land.

Later in July 1568, Captain George Thorton wrote to William Cecil to inform him they had captured a pirate near the Isle of Man. At the end of the letter, he reminded Cecil about his suit to be granted Islandmagee on the Antrim coast. He told Cecil he had 'already fortified the harbour and plans to have a fishing town there inhabited by Englishmen, ready to serve the queen at sea'.⁸⁷⁰ In the 1570s there were continued plans for plantation on the east coast of Ulster, these plans listed the coastal fisheries, and the fishers on Lough Neagh, as potential income sources.⁸⁷¹

In the end, two major plantation schemes went ahead in Ulster, the first of which was led by Thomas Smith, who secured a grant in 1571 for a plantation around the Ards and Clandeboyne on the coast of Belfast Lough.⁸⁷² In his promotional pamphlet, *A letter sent to I.B.*, Smith outlines his reasons for the scheme. He praises the Irish countryside, writing it was 'full of excellent fishe and foule'.⁸⁷³ We should not read too much into this description, as Smith applauds all aspects of the Irish environment and gives no specific insights into what fisheries he intended to exploit. However, fisheries were part of the plan, as Smith wrote that during the first year, fishing boats would be brought 'for our better victualing', in other words, to keep the plantation fed.⁸⁷⁴ Smith, in letters to his son, outlined how he thought the plantation would turn a profit.

⁸⁶⁸ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 490, p. 202, QFD ID 632.

⁸⁶⁹ *Ibid.*, no. 483, p. 483, QFD ID 631.

⁸⁷⁰ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 149, p. 67, QFD ID 658.

⁸⁷¹ *Ibid.*, no. 553, p. 218, QFD ID 678.

⁸⁷² Hiram Morgan, "The Colonial Venture of Sir Thomas Smith in Ulster, 1571-75", *The Historical Journal* 28 (1985), p. 263.

⁸⁷³ Sir Thomas Smith, "A Letter sent by I. B. Gentleman vnto his very frende Mayster R. C. Esquire, 1572", ed. Beatrix Färber (Cork: CELT: The Corpus of Electronic Texts, 2019), <https://celt.ucc.ie/published/E570001-001/index.html>, p. 409.

⁸⁷⁴ *Ibid.*, p. 412.

Naturally, a large portion of their revenue came from rents, but a great deal would also be generated by exploiting forests and letting out the fisheries.⁸⁷⁵

Walter Devereux, second Earl of Essex, spearheaded a second, much larger, plantation from 1573 onwards. It included the lands of Clandeboyne in County Down and large parts of county Antrim. Essex's grant included the 'moiety of the fishing of the Bann and free fishing in Lough Neagh'.⁸⁷⁶ Soon after arriving Essex requested that 'fishermen and their boats to be sent hither for fishing' to help support this plantation.⁸⁷⁷ In 1573 the Queen inquired about the fishery on the Bann and asked who was profiting from it.⁸⁷⁸ In response, Sidney said he had let the fishery out for a third of all the fish caught in the river that year. He also told the Queen that 'if it prove well' the fishing on the river was worth £2,000 a year.⁸⁷⁹ To put that figure in context, in the same year Essex projected that the total revenue from the plantations in Clandeboyne and the Ards peninsula would be £5,500 'besides the fishing of the Bann and of the Lough'.⁸⁸⁰ So, by Essex's estimate, the fishing on the Bann alone added another 40 per cent to the total revenue of plantation. Evidently, the income from the fisheries was integral to the financial success of the scheme.

One of the fiercest Irish opponents to the plantations was Brian McPhelim O'Neill, Lord of Clandeboyne, who had fought Smith and Essex politically and violently since 1572.⁸⁸¹ In 1573 the English priest, Roland Turner, wrote to O'Neill, declaring that the English 'rob you continuously, they take your livestock without paying, they take your fish for nothing, and they have seized your lands by force of arms and lies'.⁸⁸² O'Neill was undoubtedly aware of this, but Roland's letter does signal that fisheries were part of the economic makeup of the province and worth protecting. In October 1574 O'Neill was captured by English forces and taken to Dublin where he and his wife were executed. The Irish Annals recounted that this 'was a sufficient cause of hatred and disgust [of the English] to the Irish'.⁸⁸³

Despite the removal of opponents like Brian MacPhelim O'Neill, both plantation schemes ultimately came to nothing, with Smith's project falling apart and Essex only succeeding in

⁸⁷⁵ David B. Quinn, "Sir Thomas Smith (1513-1577) and the Beginnings of English Colonial Theory", *Proceedings of the American Philosophical Society* 89 (1945), pp. 556-557, quoting from Sir Thomas' replies to his son's articles, 18 May 1572, SP 70/146, 109.

⁸⁷⁶ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 664, p. 393, QFD ID 686.

⁸⁷⁷ *Ibid.*, no. 756, p. 447, QFD ID 714.

⁸⁷⁸ *Ibid.*, no. 790, p. 480, QFD ID 728.

⁸⁷⁹ *Ibid.*, no. 930.1, p. 566, QFD ID 731.

⁸⁸⁰ *Ibid.*, no. 1174, p. 725, QFD ID 708.

⁸⁸¹ Morgan, "The Colonial Venture of Sir Thomas Smith in Ulster, 1571-75", p. 271.

⁸⁸² O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no 567, p. 342, QFD ID 711.

⁸⁸³ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 98, quoting from the Annals of the Four Masters, v, 1679 (1574).

establishing a small sphere of control around Carrickfergus.⁸⁸⁴ Fishing was taking place around the town in 1578 when it was reported that 'above 40 fishermen daily frequent the sea', but this activity did not rival the scale of fisheries in other parts of Ulster.⁸⁸⁵ Then in 1575 articles of peace were signed between Essex and Turlough O'Neill, another Irish opponent of the English in Ulster. As part of the settlement, Turlough received the customs of the Bann and agreed to continue to allow English fishers to visit the river peacefully.⁸⁸⁶

After 1575 there would be a lull in the violence in Ulster. However, the wars and plantations of the 1570s would have a lasting impact. The disorder itself had a direct impact on fisheries, but ultimately this disorder would lead to further conflict in Ulster at the close of the sixteenth century and eventually the plantations of the seventeenth century.⁸⁸⁷ The examples highlighted here have shown that fisheries were an integral part of many Gaelic economies in Ulster and were subsequently vital to the potential financial success of English plantations. The English had not succeeded in controlling Ulster in the 1570s, but they would eventually succeed through violent means in the next century.

5.2.5 Early Plantation Plans for Munster

As the sixteenth century reached its mid-point, the province of Munster would again become the arena for violent rebellion and widespread English plantation.⁸⁸⁸ As shown in the previous chapters, one of the most extensive fisheries in Ireland was based in Munster. What happened in this province would have an enormous impact on the export of fish to places like Bristol and could help explain why exports declined so severely in the later sixteenth century.

The most significant English opponent in Munster in the 1560s was Gerald FitzGerald, 15th Earl of Desmond. The Earls of Desmond controlled large areas of Munster stretching from Dungarvan to Kerry and Limerick to Cork. They also dominated key fishing towns like Kinsale and Youghal and in effect held dominance over Gaelic Irish chiefs, such as the O'Sullivans. Towns like Youghal often asserted their independence from the Desmonds, but ultimately relied on them for protection.⁸⁸⁹ In the 1550s and 1560s, the Earl of Desmond became embroiled in

⁸⁸⁴ Margey, "Plantations, 1550-1641", p. 567; Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 98.

⁸⁸⁵ J. S. Brewer and William Bullen, eds., *Cal. Car. MSS, Vol. 2, 1575-1588* (London: Longmans, Green, Reader, & Dyer, 1868), no. 114, p. 148, QFD ID 807.

⁸⁸⁶ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 1463, p. 877, QFD ID 739.

⁸⁸⁷ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 98.

⁸⁸⁸ Margey, "Plantations, 1550-1641", p. 567.

⁸⁸⁹ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", p. 87.

a bitter dispute with Black Tom Butler, the 10th Earl of Ormand, whose family were the traditional enemies of the Desmonds.⁸⁹⁰ The dispute came to a climax in 1565 when both sides fought a pitched battle at Affane. Desmond lost and was captured but was not removed from power in the short term.⁸⁹¹

In 1567 Sir Henry Sidney went on a march through Munster to restore English authority in the province. On the way, he described the condition of the country he travelled through. Sidney described the lands of Tipperary as 'depopulated by war and famine'. At Waterford, he found the town in good condition but troubled by the followers of Lord Power, a local Gaelicised landlord. He described Dungarvan as 'a place worthy of repair' and Youghal as a 'good town', but 'its trade much damaged by piracy'. Of Limerick, he wrote that the town was 'much impaired'. Sidney also reported that 'large numbers of Spanish traders and fishermen' visited Munster each year and their actions 'lose the queen much revenue'.⁸⁹² In another letter, he wrote that the Spanish fishing in Munster and Connacht 'decays the city of Cork and the towns of Youghal and Kinsale'.⁸⁹³ Additionally, he warned these connections could lead to the Spanish king to 'invade and conquer Munster'.⁸⁹⁴ On the one hand, Sidney's desire to stop the Spanish coming to Ireland was motivated by economics; their fisheries mostly benefited the Irish to the detriment of the English fleets and towns. On the other hand, he speculated the Spanish connection to Munster could result in an invasion, a belief that would ultimately prove accurate in 1601.

Overall, on Munster, Sidney concluded that 'the constant wars and disorders have left this part of Ireland more waste than the battlefields of Europe', which speaks to the impact the fighting already had in the province.⁸⁹⁵ During the journey, Sidney and Desmond met but could not reach a settlement, and Desmond was subsequently arrested and brought back to Dublin. After eleven weeks, Sidney reported to the Queen that 'he found no one in the land sufficient to govern it properly or reform it'.⁸⁹⁶ That lack of leadership would create a power vacuum that would lead to even more conflict in Munster. It may have been in Sidney's interest to exaggerate the destruction in the province, as he was attempting to build a case against Desmond. Still, even allowing for this, it does seem that Munster was already in a state of general disorder by

⁸⁹⁰ Anthony M. McCormack, "Fitzgerald, Gerald fitz James 15th Earl of Desmond", in *Dictionary of Irish Biography*, ed. James McGuire and James Quinn (Cambridge: Cambridge University Press, 2009), <http://dib.cambridge.org/viewReadPage.do?articleId=a3149>.

⁸⁹¹ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", p. 87.

⁸⁹² Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 400, p. 172, QFD ID 1558.

⁸⁹³ *Ibid.*, no. 421, p. 179, QFD ID 626.

⁸⁹⁴ *Ibid.*, no. 400, p. 172, QFD ID 1558.

⁸⁹⁵ *Ibid.*, no. 400, p. 172, QFD ID 1558.

⁸⁹⁶ *Ibid.*, no. 400, p. 172, QFD ID 1558.

1567. Many prime fishing locations and towns had been damaged and disrupted by conflict. Furthermore, the English were suspicious of the foreign fishers that visited the area and were looking to 'reform' the province.

As discussed earlier, similar arguments relating to the threat of a French invasion were used to justify building defences and fishing settlements at Baltimore and Berehaven in 1551.⁸⁹⁷ Those proposed settlements had never come about, but following the unrest in the 1560s, there were far more English adventurers and politicians advocating and proposing plantation schemes. Already by 1565, the English had moved to reduce the income Gaelic Irish lords were getting from fisheries. For example, in June 1565, Sir Owen O'Sullivan signed a surrender and regrant agreement with the English Crown. As part of that agreement, O'Sullivan promised to give the Earl of Clanricarde, an English ally, 2s. 6d. from every fishing boat that came fishing in O'Sullivan's country, which included Berehaven.⁸⁹⁸

In 1568 the Crown was receiving a flood of proposals for planting Munster.⁸⁹⁹ Among these was a proposal from a group of English adventurers that included Humphrey Gilbert and Sir Warham St Leger, who was a grandson of the former Lord Deputy. They were suing the Queen for the fishing rights of almost the whole south coast, stretching from New Ross to the Blasket Islands. They also wanted to establish incorporated English towns at Baltimore and Berehaven and have the right to trade and operate from all the islands along the coast.⁹⁰⁰ This area covered some of the most productive fisheries in Ireland in that period, most of which were still controlled by the Gaelic Irish.

Advocates for this scheme outlined the benefits it would bring to the Crown. They wrote that havens that were 'now enjoyed by the Spanish, Frenchmen and other strangers' would be brought under the Crown's control and taxation. Furthermore, they claimed the foreign fishers and merchants supplied the Irish with the weapons and armour necessary for them to rebel, and this would be stopped. The 'abundance of fish' on the Munster would also now be 'enjoyed by natural Englishmen' and foreign fishers would have to pay for their catch. It was asserted that the fisheries established would increase the number of skilled mariners in Ireland,

⁸⁹⁷ Lennon, *C.S.P. Ire., Tudor Period 1547-1553*, no. 250, p. 99, QFD ID 598.

⁸⁹⁸ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 247, p. 366, QFD ID 785.

⁸⁹⁹ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 273, p. 111, QFD ID 662.

⁹⁰⁰ *Ibid.*, no. 302, p. 121, QFD ID 664; Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 1: 1509-1573*, no. 81, p. 399, QFD ID 1543.

presumably so they could contribute to the English navy's ranks if required. They also claimed the plantation would reduce the number of European pirates operating in Ireland.⁹⁰¹

In 1569 John Corbine wrote to William Cecil and alleged the Spanish were providing the Irish with armaments. He claimed that 200 Spanish vessels fished on the coast each year, operating mostly out of Gaelic Irish areas.⁹⁰² In 1572, Humphrey Gilbard expressed similar sentiments when he argued for the 'trade with Spain to be destroyed', and for the subjugation of Munster by force. Both acts, he wrote, would bring 'great profits to English merchants'.⁹⁰³ He also requested to be made admiral of the seas in Munster, presumably to replace the system of local fishing admirals that was detailed earlier.⁹⁰⁴ These examples clearly illustrate the determination of the English to overthrow the old system of fisheries that operated in Munster and to eliminate foreign fishers and traders. Doing this would allow them to establish their own system of taxation and authority, and ultimately to make themselves the main benefactors of the fisheries.

In 1569 the legal groundwork necessary for the takeover of fisheries in Munster was established. The Privy Council established that the Queen held the rights to all lands in Cork and could grant them at her pleasure. Furthermore, they outlined that the Queen legally held the rights to all the fisheries between 'Rosscarbery and Blasket Sound', virtually the whole south Munster coast.⁹⁰⁵ This area included the Gaelic Irish fisheries at Baltimore and Berehaven. The rights to fisheries in this area were subsequently granted to petitioners, including Warham St Leger, along with the power to seize the lands of any Irish subjects the Crown deemed rebels.⁹⁰⁶

5.2.6 The First Desmond Rebellion

However, plantation plans in Munster were not implemented without interruption. In 1569, the Butlers rebelled against the encroachment of the English planters. They were later joined by other prominent families in Munster, including the Desmonds and McCarthys. G. A. Hayes-McCoy has written that English plans to colonise Munster and take over the province's fisheries

⁹⁰¹ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 273, p. 112, QFD ID 662 & no. 327, p. 131, QFD ID 666.

⁹⁰² This estimate was discussed earlier in Chapter 3, Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 362, p. 145, QFD ID 1546.

⁹⁰³ Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 290, pp. 422-423, QFD ID 790.

⁹⁰⁴ See Chapter 3, Section 3.4.1 for more on this.

⁹⁰⁵ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 372, p. 150, QFD ID 671.

⁹⁰⁶ *Ibid.*, no. 430, p. 170, QFD ID 674.

were major motivating factors in the decision of the Irish lords to rebel.⁹⁰⁷ Religious strife was also a key motivation, but the English plantations and the material loss they represented for the Irish were evidently on the minds of the Butlers and Desmonds when they joined forces against the English. Soon after the rebellion began, the situation in Munster spiralled out of control, and the whole province was engulfed in violence.

A document from later in 1574 details threats made by the Earl of Desmond at the beginning of the rebellion. In it, the Earl threatens to destroy Kilmallock, which was done in 1571. He also threatens to besiege and capture Cork, which was never achieved. Interestingly, the Earl also threatens to seize 'seven English ships that are fishing in Baltimore, about Berehaven and Crookhaven', 'when he thinks good to his own possession'.⁹⁰⁸ The threat indicates not only did the English have a stake in the provinces' fisheries, one they were looking to expand, but the Earl was asserting his right to decide if these vessels operated there or not. The war would continue for several years. English expeditions led by Humphrey Gilbert and Sir John Perrot marched into Munster, and both utilised brutal tactics in their attempts to quell the rebellion. By 1572, James FitzMaurice FitzGerald, who had commanded the rebel forces, gave himself up to the English.⁹⁰⁹

Our understanding of these conflicts is hampered by the lack of sources from the Irish and Old English perspective. A great deal of violence and suffering goes unspoken in the State Papers. This unknown broader impact would have severely disrupted and damaged all the regular economic activities of the province. However, in some instances, fisheries were also a saving grace for towns whose terrestrial agriculture was disrupted. In 1571, the Mayor of Youghal reported to Queen Elizabeth that the townspeople were sheltering inside the walls as their fields were destroyed. The letter goes on to say, 'Our poverty is such that if our accustomed fishing of herring does not answer our expectation this season, few will live in the town for lack of food'.⁹¹⁰ This entry shows that in times of war, towns like Youghal relied on their fisheries for subsistence when other sources of food failed.

As the outcome of the war became apparent, English officials reported on the better state of the fisheries in the province. For instance, in May 1572, Sir John Perrot recounted to Lord Deputy Fitzwilliam that 'the English fishermen traffic safely on the west coast, which before they could not'.⁹¹¹ This letter was part of a propaganda scheme to convince the Crown of the benefits

⁹⁰⁷ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", p. 89.

⁹⁰⁸ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 988, pp. 605-606, QFD ID 693.

⁹⁰⁹ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", pp. 91-92.

⁹¹⁰ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 131, p. 75, QFD ID 729.

⁹¹¹ *Ibid.*, no. 275.3, p. 179, QFD ID 743.

of removing the Irish and Spanish from the Munster fisheries. In 1573 programmes for planting Munster and controlling the province's marine resources were once again being proposed in London.⁹¹² These plans featured all the same arguments made by previous proposals prior to the rebellion.

5.2.7 The Second Desmond Rebellion

During the first Desmond Rebellion, the English had sought to take more direct control of Ireland's provinces by installing regional English presidents to rule them. In Munster, Sir John Perrot became the first president, taking office in 1571.⁹¹³ Likewise, Sir Edward Fitton was installed as president of Connacht in 1569.⁹¹⁴ However, the presidents were often absent from Ireland, and it was the Earl of Desmond who most profited from this absenteeism. This was because, despite his disloyalty, the Earl was allowed to return to Ireland in 1573 on the promise he would keep the peace, and soon after his return, he began to reassert authority in Munster.⁹¹⁵

In 1576 William Drury replaced Perrot as president of Munster and took a far more active and harsh approach to control the province than that of his predecessor. Drury used terror and violence to impose himself on Munster, murdering 'malefactors' who stood against him and his goals.⁹¹⁶ The ultimate aim of Drury, and also Nicholas Malby, the new president of Connacht, was to increase the level of taxation imposed in Ireland and therefore increase the size of the English army on the island. The move to increase taxation upset all facets of Irish society, from the citizens of the Pale to the lords in Ulster and Munster.⁹¹⁷ As mentioned in the previous chapter, the 'cess' was the practice of the English army purchasing goods at discounted rates.⁹¹⁸ As the English army in Ireland increased in size, this practice increasingly became a point of contention for all Irish citizens, particularly those in the Pale.

⁹¹² Ibid., no. 506, p. 301, QFD ID 688; no. 507, p. 302, QFD ID 690.

⁹¹³ Hayes-McCoy, "Conciliation, Coercion, and the Protestant Reformation, 1547-71", p. 92.

⁹¹⁴ Terry Clavin, ed. *Fitton (Fytton), Sir Edward*, Dictionary of Irish Biography (Cambridge: Cambridge University Press, 2009).

⁹¹⁵ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", pp. 99-100.

⁹¹⁶ Benignus Millet, "A Report from the President of Munster, Sir William Drury, 24 March 1577 (1578 new style)", *Collectanea Hibernica* 46/47 (2004/2005), p. 7.

⁹¹⁷ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 102.

⁹¹⁸ Ellis, "Thomas Cromwell and Ireland, 1532-1540", p. 511.

In 1579 FitzMaurice FitzGerald, the military leader of the first Desmond Rebellion returned to Munster and resumed the conflict he had abandoned years earlier - this time with renewed religious zeal.⁹¹⁹ Many of the Earl of Desmond's supporters went over to FitzMaurice, and the Earl was faced with a difficult choice: to defeat the rebellion himself, ignore it and allow the English to take the initiative, or lead it.⁹²⁰ Later in 1579, William Drury died and was replaced by Nicholas Malby as president. Malby was more proactive in quelling FitzMaurice than Drury had been. However, his actions forced Desmond's hand and made him choose a side; he decided to rebel. Then in November 1579, Desmond was attainted, meaning the Crown could confiscate his lands after the rebellion. The authorities in Dublin hoped these land confiscations would cover the costs of the war against the Earl.⁹²¹ Ultimately, this confiscation would have far-reaching consequences for the fisheries in Munster, as would the destruction and famine caused by the conflict.⁹²²

From even earlier in the 1570s, there were renewed attempts from the English authorities to limit the activities of foreign fisheries in Ireland. This was partly motivated by economics but also increasing fear and suspicion over contact between Irish and continental Catholics. For instance, a proposal put forward in 1575 required foreign fishers to hold licences to operate in Ireland.⁹²³ After the rebellion broke out, limiting the activities of continental fishers in Munster became even more pressing for the English. In a letter from 1580 titled *A Plot for Munster*, Pelham argued that five galleys should be placed in Munster 'to inhibit and withstand fishing of strangers'.⁹²⁴ Pelham also advocated for the building of coastal forts, to prevent 'superstitious priests and runagate friars' from entering the country. These forts would also prevent the Irish from 'entertaining' pirates and deter the 'Portingalls and Spaniards, that yearly come to fish' and provide the Irish with weapons and religious influence.⁹²⁵ Pelham argued that it was vital to stop these foreign fisheries because of the revenues and contacts they brought to the Irish in Munster.

While on campaign in 1580, an English captain called Fulke Greville wrote a letter back to Francis Walsingham in London. In it, he recounted his travels on the Munster coast, including

⁹¹⁹ Ciaran Brady, "Faction and the Origins of the Desmond Rebellion of 1579", *Irish Historical Studies* 22 (1981), p. 309.

⁹²⁰ *Ibid.*, p. 310.

⁹²¹ MacCarthy-Morrogh, *The Munster Plantation*, pp. 3-4.

⁹²² This thesis cannot cover all the events leading up to the rebellion, for further reading see, Brady, "Faction and the Origins of the Desmond Rebellion of 1579" & Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", pp. 99-105.

⁹²³ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 1511, p. 918, QFD ID 699.

⁹²⁴ Brewer and Bullen, *Cal. Car. MSS, Vol. 2, 1575-1588*, no. 440, p. 285, QFD ID 815.

⁹²⁵ *Ibid.*, no. 440, p. 285, QFD ID 816.

a stay at Berehaven. There he reported the mistreatment of the 'poor English fishermen' that visited the area yearly. The details of these taxes were outlined in Chapter 3, but what is important here is his assertion that the Irish were mistreating English fishers.⁹²⁶ Greville wrote that 'many the poore mens great grief' were the charges imposed on them by the Irish. He asks how 'petty lords' can do such things in seas the English rightly owned.⁹²⁷ The rates imposed on visiting fishers had been in place for centuries, and the evidence all suggests the arrangement were mutually beneficial to all parties. Things had changed by the 1580s and Greville, Pelham and others felt England had a right to exploit these fisheries without the taxes imposed by the Irish.

As outlined earlier, some of the most active fisheries in Munster were controlled by the province's towns. These towns remained loyal to the Crown during the rebellion and therefore became prime targets for the rebels.⁹²⁸ Some notable fishing towns, such as Waterford, came out of the war relatively unscathed. However, other towns fared far worse. In 1579 the Earl of Desmond's forces attacked Youghal and burned many buildings in the city.⁹²⁹ The English report on this attack does not explicitly mention fisheries, but we must imagine this disrupted normal operations. We know that in the previous rebellion the town was reliant on its herring fishery for food security, so the culmination of agricultural destruction and disruption of the fisheries must have placed the population in greater danger of starvation. Then only a year later in 1580, the town was attacked and severely damaged once again.⁹³⁰

One of the most significant consequences of the fighting was the depopulation of Munster, particularly in the west of the province. Irish warfare was traditionally based around cattle raiding, and this tactic was used heavily during the rebellion. Both sides lost tens of thousands of animals in the conflict, severely impacting food supplies in the province.⁹³¹ Malby and other English commanders added to the depredation by utilising scorched earth tactics against the rebels; they burned fields and crops indiscriminately.⁹³²

The records of supplies to the English army can provide us with a perspective on the lack of supplies in the province. The English were forced to import large quantities of food to make up the lack of local production. For example, in December 1579, the Lord Justice, William Pelham,

⁹²⁶ See Chapter 3, Section 3.3.3.

⁹²⁷ Fulk Greville to his cousin Secretary Walsyngham, 2 July 1580, SP 63/74 f.4, QFD ID 976.

⁹²⁸ McCormack, "The Social and Economic Consequences of the Desmond Rebellion of 1579-83", p. 5.

⁹²⁹ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 15, p. 196, QFD ID 965.

⁹³⁰ McCormack, "The Social and Economic Consequences of the Desmond Rebellion of 1579-83", p. 5.

⁹³¹ *Ibid.*, pp. 3-4.

⁹³² *Ibid.*, p. 4.

reported that 'beef was too dear' in Ireland due to a lack of supply and that food, including 'butter, cheese and fish' should be sent from England.⁹³³ This topic will be discussed at length in the next chapter.

The impact of starvation and war on the general population is clear from another report of Pelham written in May 1580. In that year, the Lord Justice reported that county Kerry had 'no inhabitants at all' and said the authorities should attempt to 'allure to the inhabitants, especially fishers and merchants, to return to their houses'.⁹³⁴ Perhaps Pelham felt merchants and fishers had a better chance of operating without disruption and increasing the food supply in the province compared to farmers or overland traders.

Famine continued in Munster into 1583 when Edward Stanley, an English captain, reported that there was no food in the province and that 'the poorest sort hath been driven to eat the dead men's bodies which was cast away in the shipwreck'.⁹³⁵ This report may have been an exaggeration for dramatic effect, but it shows that the famine in Munster continued and serves to highlight the desperation of the situation. It is hard to imagine that fisheries were operating normally under the circumstances present in the province during these years.

The evidence we have all suggests that fisheries in Munster were devastated by the war. Trade to England and the continent was disrupted, while foreign fishers, who had paid dues to the Irish lords, stopped coming to the coast during these years. Anthony McCormack has estimated that one-third of the population in Munster, almost 50,000 people, died from the fighting and the resulting famines and outbreaks of plague.⁹³⁶ Given McCormack's expertise, this is likely an accurate figure, which represents a significant level of depopulation for this period. This level of depopulation would have had a massive impact on all economic activities and caused severe shortages in labour. Furthermore, the destruction of fishing infrastructure and vessels in towns and at sea must have led to a massive drop in production. Overall, the years of war in Munster had a profoundly negative impact on fisheries, and in victory, the English would seek to rebuild Munster's fisheries to benefit themselves.

⁹³³ Brewer and Bullen, *Cal. Car. MSS, Vol. 2, 1575-1588*, no. 231, p. 191, QFD ID 809.

⁹³⁴ *Ibid.*, no. 386, p. 254, QFD ID 813.

⁹³⁵ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 49, p. 448, QFD ID 1030.

⁹³⁶ McCormack, "The Social and Economic Consequences of the Desmond Rebellion of 1579-83", p. 13.

5.2.8 The Munster Plantation

On 11 November 1583, Gerald FitzGerald, 15th Earl of Desmond, was murdered in a glen in County Kerry, an act that brought four years of destructive war in Munster to an end. There were plans to settle English colonists in Munster long before the final defeat of Desmond. However, only in June 1586 were formal plans adopted for the Munster Plantation.⁹³⁷ The confiscated lands of the Earl would form the basis of this plantation and, in order to establish what lands he had owned, the English commissioned several land surveys in the years following the war. Collectively these survey sources have been known as the Desmond Survey, but this is misleading as there were two distinct surveys made over a decade apart. The first of these took place in 1584 and is known as the Peyton Survey. Not all this survey has survived, but what remains covers most of county Limerick.⁹³⁸ The goal of this survey was to establish how much land the Earl owned so it could be redistributed to English settlers.⁹³⁹

A second survey was undertaken in 1598 and covered the lands of Domhnall MacCarthy Mór, the first Earl of Clancarthy, in southern Kerry and parts of Cork.⁹⁴⁰ The MacCarthy lands were not confiscated directly after the rebellion because they put up an effective legal argument to hold on to them. In 1592 Queen Elizabeth inquired if the 'fishing at Beare Haven, Bantry, Baltimore' belonged to the Crown.⁹⁴¹ The answer came back that no record of the Queen owning the land could be found and it, therefore, remained in the hands of MacCarthy Mór.⁹⁴² However, the Queen did not have to wait long as Domhnall MacCarthy Mór died in 1596, and due to a new agreement, his lands passed to the Crown.⁹⁴³

Map 5.1 on the next page shows fishing sites in both surveys. The sites in north Kerry and County Limerick were all recorded in the earlier Peyton survey, while the sites in southern Kerry and Cork on the Atlantic coast were found in the Clancarthy survey. These sources tell us that the Earl of Desmond controlled a multitude of river fishing sites, with most of these being salmon and eel weirs. He also gained income from sea fishing along the Shannon Estuary, but these sites were not as numerous. Part of the reason for this is that sea fishing had less physical

⁹³⁷ MacCarthy-Morrogh, *The Munster Plantation*, p. 1.

⁹³⁸ Murphy, *The Desmond Survey, II The Peyton and Desmond Surveys*, p. 33.

⁹³⁹ MacCarthy-Morrogh, *The Munster plantation*, p. 33.

⁹⁴⁰ John A Murphy, "The Desmond Survey, Clancarthy Survey." (CELT: Corpus of Electronic Texts, 2013) <https://celt.ucc.ie/published/E580000-001/index.html>.

⁹⁴¹ Hans Claude Hamilton, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 4: Aug 1588-Sept 1592* (London: Longman & Co, Truebner & Co, Parker & Co, Macmillan and Co, A&C Black, A. Thom., 1885), no. 49, p. 515, QFD ID 1136.

⁹⁴² *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 38, p. 35, QFD ID 1146, no. 8, p. 11, QFD ID 1141.

⁹⁴³ MacCarthy-Morrogh, "The Munster Plantation", p. 83.

infrastructure than riverine weirs and therefore were more difficult to ascribe ownership. It is evident that river fishing was a significant source of income for the Earl, particularly around his capital of Askeaton. The castle there controlled prominent fishing weirs on the River Deel and also had its own fishing ponds to provide fresh fish to the household.⁹⁴⁴ The survey also shows that religious houses controlled several fishing weirs in the Earl's territory before the rebellion, which the English also confiscated.⁹⁴⁵



Map 5.1 – Fishing Sites in the Peyton and Clancarthy Surveys, 1584-1598.⁹⁴⁶

The Gaelic MacCarthys and their dependent families, such as the O'Sullivans, relied more on sea fishing. The Irish in south Kerry did not have access to fertile land or as many rivers suitable for weirs as Desmond did. However, they did control some of the best harbours in Munster at Berehaven, Valentia and Sneem, all of which hosted sea fisheries. Moreover, as has been explored at length, the Gaelic families at Berehaven and elsewhere developed complex systems of charges to profit from their fishing grounds.

⁹⁴⁴ Murphy, *The Desmond Survey, II The Peyton and Desmond Surveys*, p. 156, QFD ID 1534.

⁹⁴⁵ See for example, *ibid.*, p. 104, QFD ID 1515.

⁹⁴⁶ Murphy, *The Desmond Survey*; many of the sites on this map were found using, B. J. Hodkinson, *Index of Placenames of the Desmond Survey* (Limerick: Limerick Museum, 2013).

In 1587 an anonymous English observer noted that in O'Sullivan's country there was 'no good farmland, but all valleys, cragged rocks and hills, can yield no great commodity'.⁹⁴⁷ Therefore, the clan 'liveth only by the sea, and the commodity thereof, as his fishing'. Again, the fragility of the fisheries is noted as the author reports that 'fishing is a thing uncertain, for some years if fishing do fall upon the coast, then Dunboye is worth much; if fishing fail, it cannot yield profit'.⁹⁴⁸ This report could be alluding to the fickle nature of herring shoals which changed their migration patterns over time, or it could also relate to the presence of foreign fishing fleets, which as the sixteenth century progressed, became more infrequent visitors to the Irish coast. Overall, the survey and the accompanying map illustrate that geography determined economic structure; those Irish lords with inferior land looked outwards to the sea for their wealth.

Map 5.2 – Map of the Island of Dariry, c. 1597-8.⁹⁴⁹

the island of 'Dariry', known today as Valentia. The survey sources illustrated that the island was one of the most prominent sea fishing locations in the area.⁹⁵¹

The Munster plantation would take decades to develop and never fully met the aspiration of its original planners.⁹⁵² However, the conflicts of the late sixteenth century transformed Munster and ensured its fisheries would never be the same. The population had been severely reduced, and many fishing towns had suffered irreparable harm. Trading and fishing relationships that had developed over centuries had been lost or disrupted, and by the early years of the seventeenth century, all the most prominent Gaelic fishing locations in Munster were in English hands.

5.2.9 The Spanish Armada

The Spanish Armada was never destined for Ireland, and those Spanish who did land in Ireland did not invade but were rather washed ashore as castaways.⁹⁵³ Nevertheless, the events surrounding the Armada did impact fisheries and affected the English authorities' attitudes towards fishing in Ireland. As aforementioned, the English continuously feared a Spanish invasion of Ireland. As tensions rose between England and Spain, the Spanish fishers who visited Ireland each year were increasingly perceived as dangerous and a threat to English control in Ireland. The Armada and related Anglo-Spanish War only amplified those fears and ultimately would mark the end of Spanish fishing in Ireland.

After months of build-up and speculation in England and Ireland, the Spanish Armada launched in August 1588. After losing some initial engagement with the English, a large portion of the Armada attempted to return to Spain by going around Ireland. During the voyage, many of the Spanish ships were shattered upon the Irish coast by violent Atlantic storms.⁹⁵⁴ Around the time of the Armada, both the Spanish and English used state-sponsored pirates, or privateers as we know them today, to damage each other's maritime operations. These policies led to a dramatic rise in piratical activity on the Irish coast in the last decades of the sixteenth century and severely disrupted fisheries in Ireland. The extent of that impact will be discussed in the next section of this chapter.

⁹⁵¹ For the reference to fishing on the island see, *ibid.*, p. 25, QFD ID 1503 & p. 14, QFD ID 1479.

⁹⁵² Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 115.

⁹⁵³ Laurence Flanagan, "The Irish Legacy of the Spanish Armada" *Archaeology Ireland* 2 (1998), p. 145.

⁹⁵⁴ *Ibid.*; K. S. Douglas, Hubert Lamb, and C. Loader, "A Meteorological Study of July to October 1588 The Spanish Armada Storms", *Climatic Research Unit Research Publication* 6 (1978).

In the months after the first failed Armada, there were consistent reports of other Spanish fleets preparing to invade Ireland. In February 1589, for example, it was reported that a Spanish fleet would invade Ireland and use 100 vessels from the Basque Newfoundland fishing fleet to land troops.⁹⁵⁵ Things had changed to the point that ships that may have fished in Irish waters in years previous were now involved in plans to invade. This entry illustrates not only the change in Spanish fishing behaviour but also the changed relationship to Ireland.

The Armada and related war between Spain and England made the position of Spanish fishing fleets in Irish water untenable. English control in Ireland had significantly increased since the beginning of the sixteenth century; any war involving Spain and England now also involved Ireland. Spanish ships were no longer safe in Irish waters and additionally many of the areas that had traditionally welcomed foreign fleets had come under English influence. However, it appears that English fishing fleets continued to visit Irish waters, particularly around Waterford. From the reports in the State Papers, it appears it was these English fleets the English were most concerned with protecting.

The devastating famines that struck Ireland during the second Desmond Rebellion seem to have motivated the English to introduce several measures in the late 1580s to avoid a repeat should the Spanish invade. One of those measures was to restrict the export of foodstuffs, including fish.⁹⁵⁶ These restrictions were designed to ensure the English army would have a ready supply of food in Ireland if needs were. However, the restrictions led to a massive oversupply of fish in Ireland. In January 1590, merchants from different parts of Ireland, including Waterford and Duncannon, petitioned to be allowed to export fish once again.⁹⁵⁷ One of those reports stated that 'about 8 or 10 [thousand] barrels' of herring were going unsold and they would 'not fit to be eaten' by Lent.⁹⁵⁸ The same figure was reported in another letter to the Lord Deputy around the same time, and it was also stated that the merchants would be 'utterly undone' unless they were allowed to export the fish.⁹⁵⁹ The petition was successful, and the merchants were permitted to export their fish 'into England or some parts of France'. However, the merchants were forbidden from trading with Spain, and if the Lord Deputy required fish for the army, then he could still purchase it on demand.⁹⁶⁰ This episode shows that fish production was picking up in Ireland after the end of the Desmond rebellion. The figure of 10,000 barrels

⁹⁵⁵ Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 4: Aug 1588-Sept 1592*, no. 6, p. 129, QFD ID 1103.

⁹⁵⁶ Letters of the Privy Council to the Lord Deputy, 5 Jan 1589-90, SP 65/12, QFD ID 1596.

⁹⁵⁷ *Ibid.*, QFD ID 1596.

⁹⁵⁸ Lord Deputy to Burghley, 26 Jan 1589-90, SP 63/150 f.40, QFD ID 1118.

⁹⁵⁹ Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 4: Aug 1588-Sept 1592*, no. 23, p. 299, QFD ID 1597.

⁹⁶⁰ Privy Council to the Lord Deputy, 8 Mar 1589-90, SP 65/12 f.180, QFD ID 1121.

represents a significant catch and would equate to 1,578 TLW. However, the fishing industry still faced substantial barriers in the form of restrictions placed on them by the authorities. These restrictions also partly explain why so little fish was recorded in English and Welsh ports during this period.

5.2.10 The Nine Years War

By the 1590s English authority over the south and west of Ireland had been significantly extended and only the northern province of Ulster remained mostly independent from English control. As discussed, previous plantation schemes for Ulster had all failed, but by the last decade of the sixteenth century, there was a renewed drive among the English to bring this final standout province within their control.⁹⁶¹

Violence in Ulster increased from the late 1580s, and disputes over the control of fishing on the River Bann began to emerge again. In 1587 Turlough Luineach O'Neill requested patents to confirm his ownership of the fishing on the Bann and Lough Foyle 'as he now possesseth'.⁹⁶² O'Neill's letter illustrates the Irish had maintained control of the river by the late 1580s. However, the English were not happy with the Irish control. In 1588 Francis Strafford left Carrickfergus and crossed the Bann to kill Fordorough O'Cahan, whose alleged crimes included disrupting the fishing of Dublin merchants on the Bann. Strafford wrote that O'Cahan had murdered fishers and made them liable for 'outrageous exactions when they came to fish the Bann'.⁹⁶³ Stafford's actions tell us the English were not interested in a peaceful settlement in Ulster and were willing to use violence to achieve dominance.

In this atmosphere, new plantation schemes began to be proposed again. In 1591, Captain Eggarton, the constable of Carrickfergus, suggested a plantation in lower Clondeboyne on the shore of Lough Neagh, which would foster the 'development of the fisheries there'.⁹⁶⁴ Following previous bitter experiences, the English were now more aware of the difficulty of traversing Ulster's terrain. In 1592, the Archbishop of Cashel wrote that Ulster had 'three greater rivers where are shipping and fishing, viz, the Earne, Bann and Lough Foyle'.⁹⁶⁵ He proposed building

⁹⁶¹ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 115.

⁹⁶² Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588*, no. 28, p. 375, QFD ID 1075.

⁹⁶³ *Ibid.*, no. 36, p. 503, QFD ID 1593. This event was also mentioned earlier in Chapter 3.

⁹⁶⁴ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 4: Aug 1588-Sept 1592*, no. 23, p. 423, QFD ID 1124.

⁹⁶⁵ *Ibid.*, no. 47, p. 489, QFD ID 1133.

bridges over the Erne and Bann, which would ease travel into and within the province significantly.

Small scale confrontations continued throughout the early 1590s as the English gradually encroached into Ulster. Around this time Hugh O'Neill emerged as the figurehead of the Irish resistance in Ulster. He was supported not only by the traditional O'Neill allies but also by the O'Donnells of Tyrconnell, the second most powerful lords in Ulster. In the summer of 1595, Sir Henry Bagenal led a force into Ulster to resupply an English garrison at Monaghan. O'Neill stunned the English by attacking and defeating this army at Clontibret, and by June the same year, O'Neill was declared a traitor by the Crown.⁹⁶⁶

The Anglo-Spanish war that began in 1585 also provided the Ulster Irish with an opportunity to obtain Spanish aid in their struggle against the English. This possibility caused immense anxiety among the English authorities who, as we have seen, had been anticipating a Spanish attack long before the war in Ulster began. In 1596 there was a report from Sir Geffrey Fenton in which he claimed that the Irish lords were requesting aid from the Spanish king. He guessed the Spanish would land in Munster and this would pose a threat 'to the English herring fishery off Waterford in November and December'.⁹⁶⁷ This report confirms that the English fishery in Ireland was still taking place at this time, and the authorities were concerned with its protection.

The English had better reason now than ever to fear attack from Spain. There are several accounts from 1594 onwards of Spanish ships harassing fishers on the Irish coast. In May 1594 it was reported that a merchant was carried out to sea by 20 Spaniards aboard a pinnace. The same ship threatened a fisher called Walter Devoraxe, but he had his life spared because he was Irish and apparently would 'have been hanged if he had been English'.⁹⁶⁸ The same Spanish pinnace captured another fishing boat near Dungarvan at the end of May. A second much larger Spanish vessel with a crew of 300 was reported in the area at the same time.⁹⁶⁹

The English concern over the Spanish harassment of fishing boats may have been related to their concern with ensuring food security in Ireland and supplying their forces. A pamphlet, written in 1598, claimed to provide an Irish perspective on the war; the unnamed author wrote that the English could not prevail against their most potent captains, namely, 'Captain Hunger,

⁹⁶⁶ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 121.

⁹⁶⁷ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 6: July 1596-Dec 1597*, no. 53, p. 153, QFD ID 1199.

⁹⁶⁸ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 5, p. 252, QFD ID 1603.

⁹⁶⁹ *Ibid.*, no. 5, p. 252, QFD ID 1156 & 1154.

Captain Sickness, [and] Captain Cold'.⁹⁷⁰ As we will see, both sides used hunger as a weapon during the war. The tract also describes how the Irish drew English forces deep into Ulster and waited for hunger and exhaustion to set in before applying hit and run tactics. However, the lack of supplies available for the English in Ulster was also down to their own scorched earth tactics.⁹⁷¹

In 1595 the English army in Ireland consisted of 7,000 soldiers, a number that would rise to 21,000 by the war's end.⁹⁷² The records concerning army supplies and rations in Ireland provide insight into the wider availability of food during the war and the exceedingly high sums of money spent on the war by the English. Many of these records will also feature in the next chapter as we explore the consumption patterns of fish during this period. In the climate of dearth, alternative food sources came to the fore. The State Papers shows a massive influx of fish from Newfoundland during the 1590s imported to feed both the army and civilian populations. That topic will be discussed in detail in the next chapter.

In January 1597 Sir Henry Wallop wrote that there was a shortage of food and all prices were extremely high. He also reported that there had been a 'failure of the fishing at Waterford' and unless herring was imported from Scotland 'the scarcity in Ireland will be great'.⁹⁷³ In May the same year, the Lord Deputy, Thomas Lord Burgh, wrote to the Privy Council, setting out how the English Pale was in a state of 'poverty and waste' and there was 'death and scarcity in all other places'.⁹⁷⁴ In another letter, Burgh wrote 'our extremity is so great here by reason of the dearth and scarcity of victuals in all parts of the realm, but especially in the English Pale'.⁹⁷⁵ Later he described how the country of the Pale was in waste, many villages were depopulated, and crops went unplanted.⁹⁷⁶ The people and his forces were utterly dependent on food imports from England and were suffering from famine.⁹⁷⁷ The failure of fishing evidently contributed to this shortage, illustrating why fisheries had strategic value.

O'Neill and the other Irish lords in Ulster do not seem to have experienced the same shortages for most of the war. In July 1597, an English captain, Sir Conyers Clifford, reported that

⁹⁷⁰ Ernest George Atkinson, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 7: Jan 1598-Mar 1599* (London: Her Majesty's Stationery Office, 1895), no. 75, p. 438, QFD ID 1249.

⁹⁷¹ Lennon, *Sixteenth Century Ireland, The Incomplete Conquest*, p. 301.

⁹⁷² Canny Nicholas, *Making Ireland British, 1580-1650* (Oxford: Oxford University Press, 2001), p. 66.

⁹⁷³ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 6: July 1596-Dec 1597*, no. 33, p. 213, QFD ID 1204.

⁹⁷⁴ *Ibid.*, no. 66, p. 301, QFD ID 1221.

⁹⁷⁵ *Ibid.*, no. 21, p. 285, QFD ID 1217.

⁹⁷⁶ *Ibid.*, no. 58, p. 299, QFD ID 1220.

⁹⁷⁷ *Ibid.*, no. 26, p. 288, QFD ID 1219.

O'Donnell was 'now stronger in men than any of his ancestors ever have been, and, by spoiling the country, better able to maintain them'.⁹⁷⁸ Clifford was likely exaggerating, but it does seem that the Gaelic troops had greater food security during the war than their counterparts in the English forces. Part of that security came from the fisheries of Ulster. As mentioned earlier, in May 1596, a report was made that 'Tyrone and his young lady' were at Castle Roe near Coleraine for the purpose of 'fishing salmon on the Bann'.⁹⁷⁹ The control of this river would have provided the Earl with a ready supply of salmon, for local consumption, but also export.

The Earl's forces were exceptionally well organized compared to previous Irish armies; it was said that in 1598 it cost £500 a day to keep the war going. Hayes-McCoy writes that this suggests 'the existence of a buoyant economy'.⁹⁸⁰ As we saw in the previous chapter, there was a massive import of salmon from Ireland to Scotland in 1597/8. Given the circumstances, it is possible this fish came from Ulster. The salmon exports would have provided an abundant source of income to the Earl and help explain how he kept fighting.

The Irish had other sources of food as well. A report, written by an unknown English captain in 1599, suggests that garrisons should be placed in Munster 'to hinder the rebels from sowing their corn in the plains'. He wrote that the Irish usually planted from March until mid-May each year. In addition, the Irish had large cattle herds, which were kept in the bogs and forests during the winter before being moved to the plains during the summer to graze. The cattle were at their weakest in spring, which was the same period the crops were planted.⁹⁸¹ This knowledge of the Irish food system was valuable to the English forces, as it allowed them to plan how they would disrupt Irish food supplies with the greatest effect.

It does seem that trade between continental Europe and Ulster continued in this period as well. In a letter that was mentioned earlier in Chapter 4, Captain Charles Plessington reported on his voyage to the west coast in 1601. He wrote, 'every year, till now' the coast had been 'much frequented with French-Men' who had carried wine and weapons to the ports of Killybegs, Donegal, Ballyshannon and Sligo. The ships brought 'hides, tallow and fish' back to France in

⁹⁷⁸ Ibid., no. 143, p. 408.

⁹⁷⁹ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 27, p. 519, QFD ID 1185.

⁹⁸⁰ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", pp. 125-126.

⁹⁸¹ Ernest George Atkinson, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 8: Apr 1599-Feb 1600* (London: Her Majesty's Stationery Office, 1899), no. 88, p. 329, QFD ID 1610.

return.⁹⁸² This entry suggests that the continental trade was important for supplying O'Donnell with goods and weapons, and only in 1601 was this trade effectively stopped by the English.

Meanwhile, by the end of 1597, the English army's supply issues in Ulster were continuing. The Lord Justices reported in November 1597 that the herring fishery 'failed now here throughout the whole land'. The fish that had been requested from Scotland had not arrived because the fishery had also failed there too. The failure of the fishing in Scotland suggests that the downturn in Ireland was not wholly linked to the war, and there were some wider natural fluctuations at play in both regions. The Lord Justices wrote that herring was 'a most important provision and profitable for her majesty' and supplies were requested from England to meet the demand'.⁹⁸³

During this period, several descriptions of Ireland's fisheries were penned by English authors, including the Vicar of Christchurch, John Bell, whose thesis was cleverly titled *How Irish rebels may be taught to be obedient to her Majesty*. He claimed Ireland was 'so full of fish, so full of cattle, and so full of fowl, that there is not a country upon the face of the earth more beneficial to the life of man'.⁹⁸⁴ Spencer, in, *A View of the Present State of Ireland*, uses similar language, claiming Ireland was 'replenished with all sortes of fishe most abundantlie'. Interestingly, Spencer writes that the western and southern shores of Ireland were heavily trafficked with Spanish and French ships for fishing, which in turn left a negative cultural influence on the Irish.⁹⁸⁵

In 1601 the then Lord Deputy, Lord Mountjoy, wrote a 'Discourse concerning Ireland', in which he said Ireland was 'one of the goodliest provinces of the world' and 'abounding with all the sustenances for life, as corn, cattle, fish'. Mountjoy even praised the Irish people, writing that they had an 'excellent temper'.⁹⁸⁶ However, he wrote that their leaders had led them astray and, in his opinion, Ireland would never reach its full potential until it was 'governed by virtue'. This rhetoric, and similar tropes from other English writers, should not be read as objective views of Ireland's natural resources; these writers were trying to convince the Crown to invest

⁹⁸² Captain Charles Plessington to the Earl of Nottingham, Lord High Admiral, and Secretary Cecil, 2 Sept 1601, SP 63/209/1 f.148, QFD ID 1397.

⁹⁸³ The Lords Justices Loftus and Gardener and Council of Ireland to the Privy Council, 29 Nov 1597, SP 63/201 f.175, QFD ID 1230.

⁹⁸⁴ Atkinson, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 7: Jan 1598-Mar 1599*, no. 156, p. 498, QFD ID 1249.

⁹⁸⁵ Spencer's text was written between 1595 and 1596, Edmund Spencer, "A View of the Present State of Ireland, 1633", ed. William M. Hennessy (Cork: University College, Cork, 2008), <https://celt.ucc.ie/published/E500000-001/>.

⁹⁸⁶ Ernest George Atkinson, ed. C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 10: Nov 1600-31 July 1601* (London: His Majesty's Stationery Office, 1905), no. 122, p. 251, QFD ID 1368.

more in winning the war and settling Ireland. In their eyes, the larger they made the prize, the more motivated the Crown would be to invest. Ultimately, these tracts had the same conclusion: Ireland had bountiful fisheries and other natural resources, but these were not being utilised by the local inhabitants and by 'civilising' the island the English could unlock this potential.

During this period, plantation schemes, like those that had failed in the 1560s, began to be proposed again. Like then, many of these included plans for exploiting fisheries. In, *A Discourse to Show that Planting of Colonies...*, the author recommended capturing the 'fishing in Lough Foyle, the Bann, and such like' and planting it with English residents.⁹⁸⁷ While the war was disruptive and destructive in Ulster, it would ultimately be the seventeenth-century plantation that would transform the ownership and operation of fisheries in the province and give the English almost total control over the best fishing resources.

In 1598 the war spread to Munster where there was another uprising. The Earl of Ormond, who remained loyal, wrote to London in October asking for the maritime towns of the province to be protected, presumably to defend the fisheries and ensure supplies and soldiers could reach the region.⁹⁸⁸ Additionally, the threat of a Spanish invasion was still present. In March 1598, it was reported another Spanish fleet was assembling, and in response, 'most of the shipping of all the ports in Ireland' and the 'trading there for wines and other commodities' ceased. Additionally, there were many reports of Irish ships seized in Spain, while pirates captured additional vessels.⁹⁸⁹

In 1599 the English were planning to use their superior naval strength to defeat the rebels on the west coast. They planned to take Inishbofin using mariners from the English west country who were 'acquainted with the fishing at Ennisboffin [Inishboffin]'. The authors claimed the fisheries provide 'great profit toward the relief of the garrison' in the west of Ireland.⁹⁹⁰ In January 1600, a system was proposed to encourage fishers to travel to 'the Bann, Lough Foyle, and Lough Swilly'. The proposal declared that 'salmon, herring, eels, cod' and many other sorts of fish were in high supply in the region. The fishers were to be provided with gear and given monetary incentives; however, the authors made no provision to protect them from the Irish who controlled the area.⁹⁹¹

⁹⁸⁷ C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 7: Jan 1598-Mar 1599, no. 75, p. 438, QFD ID 1249. The full title is *A Discourse to Show that Planting of Colonies, and that to be Begun only by the Dutch, will give best entrance to the reformation of Ulster*.

⁹⁸⁸ Ibid., no. 118, p. 293, QFD ID 1246.

⁹⁸⁹ Ibid., no. 87, p. 84, QFD ID 1242.

⁹⁹⁰ Atkinson, C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 8: Apr 1599-Feb 1600, no. 53, p. 163, QFD ID 1269.

⁹⁹¹ Ibid., no. 7, p. 377, QFD ID 1276.

Nothing seems to have come from these proposals, but in the summer of 1600, the English did land an amphibious force at Lough Foyle and established a fort there. They planned to build a fishing town there to make the outpost more self-sufficient.⁹⁹² A letter from December that year, titled *A description of Lough Foyle and the country adjoining*, described the fishing resources in the area. The loughs and rivers in the region were said to be 'full of salmon and in season all year', while the River Foyle upstream from Derry was to be 'wonderfully replenished with trout's and flounders' that lasted all summer. In addition, the authors praised Lough Swilly for having 'excellent good herring fishing for two months in the latter end of summer' and for having plentiful oysters.⁹⁹³

After establishing their outpost in Lough Foyle, the English burned an Irish corn magazine in the area, captured thousands of animals and killed 150 civilians.⁹⁹⁴ The choice of Lough Foyle as the site for a fort was clearly in part motivated by the region's abundant fishing resources. These fisheries would help feed the remote garrison and would also deny this critical source of food and income to the Irish. The further destruction of terrestrial agriculture demonstrates that denying enemy food composed a vital part of the English strategy in the region. This is again demonstrated in a letter written in 1601 by Captain Humphrey Willis. He wrote that holding the 'River Liffer', known today as the River Foyle, was of great strategic importance because 'whosoever shall farm it in any sort whatsoever may prepare himself presently against the season of the year'.⁹⁹⁵ In other words, the river would supply whoever controlled it with food for the next campaigning season.

In January 1601 Sir Arthur Chichester wrote to Robert Cecil, telling him that he should place garrisons at Coleraine on the River Bann and Lecale on the Strangford River. Chichester claimed this would take 'more assistance and relief' away from O'Neill, 'than Spain affords him'. He also suggested that, by placing 'skilful fishermen' on the Bann, the garrison there would not require almost any resupply as they could provide for themselves locally.⁹⁹⁶ Of Lough Neagh and the Ulster coast, Sir Rafe Lane wrote in 1602 that they were 'so plentiful all the year round

⁹⁹² Ernest George Atkinson, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 9: Mar-Oct 1600* (London: His Majesty's Stationery Office, 1903), no. 57, p. 194, QFD ID 1284.

⁹⁹³ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 10: Nov 1600-31 July 1601*, no. 85, pp. 92-95, QFD ID 1345.

⁹⁹⁴ *Ibid.*, no. 85, p. 92, QFD ID 1346.

⁹⁹⁵ *Ibid.*, no. 18, p. 158, QFD ID 1354. The name Liffer does live on in the town of Lifford which lies on the River Foyle.

⁹⁹⁶ *Ibid.*, no. 5, p. 142, QFD ID 1351.

with cod and ling that a whole army might be victualled from the fishings there'.⁹⁹⁷ Overall, the examples outlined above illustrate that food supplies were of central strategic importance during this war. Because of this, fisheries became directly involved in the conflict and factored into decision making for both sides.

As the war continued, famine struck again in 1600. The new Lord Deputy, Charles Blount, the 8th Baron Mountjoy, wrote to the privy council in April informing them the country was 'generally so wasted and eaten up' and the army had no supplies to draw on.⁹⁹⁸ In a later letter, he wrote that a 'great famine' was growing and storms hindered the approach of ships with food.⁹⁹⁹ In October, Sir George Carew reported from Mallow in Cork that the province had been 'so much wasted by this last summer's war' no supplies at all remained, and unless he went to a port town and received supplies from England, his soldiers would starve.¹⁰⁰⁰

Fish, like every other foodstuff, was in great shortage, which indicates that fisheries were not functioning normally, something confirmed by the complete lack of fish imports to Bristol around this time. Shipment of Newfoundland fish to Ireland seem to have also peaked in this period.¹⁰⁰¹ It is evident that the lack of supplies at home made the Newfoundland fish necessary. The scale of those imports and the impact they had on the food security of the island will be discussed further in the following chapter.

By 1601 the war was reaching a climax. O'Neill and his Irish allies were under pressure in Ulster from continual English incursions and, after years of speculation and anticipation, the Spanish finally intervened in Ireland and landed a force at Kinsale in September 1601.¹⁰⁰² The English reacted swiftly and soon trapped the Spanish army at Kinsale. It seems likely the Spanish expected to supply their troops locally, as they brought a large quantity of salt which could be used to preserve fish and meat.¹⁰⁰³ Following the landing, O'Neill and O'Donnell decided to march from Ulster to meet up with the Spanish army in Munster. However, on their arrival outside Kinsale, the Irish forces were quickly defeated by the English army. The Spanish troops had remained trapped in the town during the battle and surrendered soon after. The war

⁹⁹⁷ Robert Pentland Mahaffy, ed. *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)* (London: His Majesty's Stationery Office, 1912), no. 210, p. 317, QFD ID 1435.

⁹⁹⁸ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 9: Mar-Oct 1600*, no. 74, p. 66, QFD ID 1309.

⁹⁹⁹ *Ibid.*, no. 104, p. 91, QFD ID 1310.

¹⁰⁰⁰ *Ibid.*, no 113, p. 497, QFD ID 1323.

¹⁰⁰¹ See for example, *ibid.*, no. 134, p. 270, QFD ID 1295.

¹⁰⁰² Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 134.

¹⁰⁰³ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, preface, p. v.

did not immediately end after the Battle of Kinsale; O'Neill fled back to Ulster and continued the fight, but militarily the battle ended the war and what followed was only a long-drawn-out defeat for the Irish.¹⁰⁰⁴

The O'Sullivans of Berehaven had joined O'Neill's side earlier in the war, but in 1602 they were attacked by Lord President Carew, and their castle at Dunboy was destroyed.¹⁰⁰⁵ Following the attack, Carew reported that O'Sullivan had maintained rebels on his land by supplying them with the proceeds of his fisheries. He estimated that the fishing there had previously been worth £500 a year, but by 1602 foreign fishers no longer wanted to come because the castle was gone, leaving them open to attack. Carew wrote that the fishers now had 'place to defend him for the insolencies of the Irish', or where they could safely dry their fish on the shore.¹⁰⁰⁶ Then in August, Carew reported that the O'Sullivans had seized an Irish fishing boat.¹⁰⁰⁷ This capture suggests that some fishers did still want to use the waters at Berehaven, but the English were evidently no longer welcomed by the O'Sullivans. Meanwhile, if the Spanish and French had come, they would have been open to attack by the English.

In a final attempt to end the war, the English again turned to scorched earth tactics in Ulster that resulted in yet more famine. In September 1602, Mountjoy reported that 'above three thousand starved in Tyrone' as a result of crop destruction.¹⁰⁰⁸ Again we can assume that the English control of important fishing resources contributed to the hunger. In this climate, the Irish confederacy began to fall apart. In 1602 the Crown and O'Cahans reached a peace agreement that meant the Bann was 'wholly reserved' for the maintenance of the Coleraine garrison.¹⁰⁰⁹

Then on 30 March 1603, Lord Deputy Mountjoy signed a peace agreement with Hugh O'Neill. Mountjoy was aware that Queen Elizabeth had died six days prior, but O'Neill was not.¹⁰¹⁰ The new king, James I, signed off on the agreement and O'Neill was pardoned. The Irish defeat in the Nine Years War marked the end of the Tudor re-conquest of Ireland. For the first time, Ireland was ruled by a single central power.¹⁰¹¹ The new English hegemony would change all

¹⁰⁰⁴ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 135.

¹⁰⁰⁵ Lennon, *Sixteenth Century Ireland, The Incomplete Conquest*, p. 301.

¹⁰⁰⁶ Brewer and Bullen, *Cal. Car. MSS, Vol. 4, 1601-1603*, no. 254, p. 254, QFD ID 1619.

¹⁰⁰⁷ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 468, p. 474, QFD ID 1456.

¹⁰⁰⁸ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 135.

¹⁰⁰⁹ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 211, p. 302, QFD ID 1454.

¹⁰¹⁰ Lennon, *Sixteenth Century Ireland, The Incomplete Conquest*, p. 303.

¹⁰¹¹ Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 140.

facets of Irish life, including fisheries. O'Neill eventually fled Ireland in 1607 and his lands were subsumed into the new Ulster Plantation. The English had spent an estimated £2,000,000 on the war, which serves to illustrate the scale of the conflict.¹⁰¹² The *Measuring Worth* converter estimates that in terms of purchasing power £2,000,000 from the late sixteenth would be worth £449,200,000 in today's money, which provides some indication of the scale of expenditure.¹⁰¹³

One of the most visible signs of the impact of conflict on fisheries in the late sixteenth century can be seen in the decline of fishing towns. As outlined earlier, the town of Carlingford was one of the most prosperous herring fishery towns in the fifteenth and early sixteenth centuries. Carlingford was hit hard by the Kildare Rebellion, but the town's herring fishery experienced recovery in the mid-sixteenth century. However, the town was described as 'extremely impoverished' by 1575.¹⁰¹⁴ The Nine Years War brought reprieve to Carlingford, as the English used it as a hub for importation. However, at the conclusion of the war, the army left the town, and, without its traditional herring fishery, it was left largely abandoned. By 1606 Carlingford was described as one of the 'poor towns' of Ulster.¹⁰¹⁵

A similar decline was experienced by many other Irish fishing towns toward the end of the century. For example, Colin Breen and Aidan O'Sullivan have written that Ardglass was essentially 'abandoned at the end of the sixteenth century with the collapse of the Irish Sea fisheries'.¹⁰¹⁶ As mentioned earlier in Chapter 2, the stone fish traps of Strangford Lough were similarly abandoned by local fishers in the late sixteenth century.¹⁰¹⁷ Further evidence of decline can be found in a survey of customs duties from 1611 written by an English official called Robert Cogan.¹⁰¹⁸ As part of his survey Cogan provided short descriptions of many fishing towns and their general state at that time. For example, he describes Kinsale as 'a poor town ruined by the last rebellion' that was still reliant on its diminished fisheries for income.¹⁰¹⁹ He called Dungarvan 'a very poor fisher town', Dingle a 'poor ruined place' and New Ross 'a poor ruined town'.¹⁰²⁰ Not every town described by Cogan was in poverty; some important fishing towns like Waterford were still actively trading. As illustrated in the previous chapter, new trades in

¹⁰¹² Hiram Morgan, "Hugh O'Neill and the Nine Years War in Tudor Ireland", *The Historical Journal* 36 (1993), p. 22.

¹⁰¹³ "MeasuringWorth." (The MeasuringWorth Foundation, 2020)
<https://www.measuringworth.com/calculators/ukcompare/relativevalue.php>.

¹⁰¹⁴ Simms et al., "Carlingford", p. 3.

¹⁰¹⁵ Charles William Russell and John Patrick Prendergast, eds., *C.S.P. Ire, Relating to Ireland, of the Reign of James I. Vol. 1. 1603-1606* (London: Longman & Co., 1872), no. 719, p. 464.

¹⁰¹⁶ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 188.

¹⁰¹⁷ McErlean, McConkey, and Forsythe, *Strangford Lough: An Archeological Survey of the Maritime Culture Landscape*, p. 148.

¹⁰¹⁸ Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 101, pp. 174-177, QFD ID 915.

¹⁰¹⁹ *Ibid.*, no. 101, p. 176, QFD ID 924.

¹⁰²⁰ *Ibid.*, no. 101, pp. 174-177, QFD ID 925 & 921.

wood, hides and beef flourished in the seventeenth century despite the destruction of the previous century. However, it is clear from Cogan's report that fisheries no longer held the significance they had in the sixteenth century.

A century of conflicts played a critical role in damaging the sustainability of fisheries in Ireland. Conflict damaged infrastructure, ruined towns, and depressed trade. Famines resulting from wars reduced the population and destroyed normal economic life during many periods throughout the century. Then, after 1603, many of the most important fishing locations in Ireland changed hands. This change of ownership fundamentally shifted the character and operation of fisheries that had existed under the same owners for centuries.

Furthermore, the Nine Years War put an end to continental fisheries in Ireland. As the English took over Ireland, its waters became hostile for Spanish and French fleets. As Ireland became more embroiled in international conflicts between the great powers of Europe, the island and its merchants and fishers were more exposed to attack by pirates from across Europe. The next section will investigate the impact of piracy on fisheries during the sixteenth century.

5.3 The Impact of Piracy on Fisheries

Terrestrial conflict had a significant impact on fisheries in sixteenth-century Ireland, as outlined in the previous segment. This next section will further explore the influence of piracy on fisheries, as well as how piracy impacted the development and sustainability of fisheries and the fish trade in and around Ireland in the sixteenth century. The first part of this analysis will present a macro-overview of piracy in the sixteenth century, while the second part will examine the specific impact of piracy on fisheries.

Today the United Nations Convention on the Law of the Sea defines piracy as: 'any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft'.¹⁰²¹ Piracy in the early modern period is more difficult to define and existed in shades of legal greyness. Many nations had their own maritime or Admiralty Courts that would deal with matters of piracy, and pirates would often move between ill-defined international jurisdictions. To complicate matters, in the sixteenth century, a distinction was made between acts of piracy, reprisal and prize taking. Reprisal was sanctioned through 'letters of reprisal' that authorised vessels to capture enemy ships and take them back to a friendly port. These were issued in response to another act of piracy and were

¹⁰²¹ UN General Assembly, "United Nations Convention on the Law of the Sea" (1982), p. 61.

meant to allow the victims of piracy some form of redress for their losses, ideally by capturing those who had attacked them in the first place.¹⁰²² In this way an act of prize taking could be viewed as a legitimate source of justice.¹⁰²³ Additionally, letters of marque could be issued that allowed a commissioned ship to sail into foreign waters and capture the ships of other nations.¹⁰²⁴

However, during times of war, letters of reprisal were issued with the intent of targeting the trade of enemy states. For example, the English, Dutch and French all sent ships to target the Spanish treasure fleets without cause for reprisal.¹⁰²⁵ In this sense, reprisal was similar to state-sponsored privateering, but the word privateering itself did not enter common usage until the seventeenth century.¹⁰²⁶ Because of all these complications any act of 'piracy' in the early modern period has to be 'defined within the context of what is taking place economically, politically and socially at any given time.'¹⁰²⁷

J. L. Anderson writes that 'private purpose (animus furandi) has generally been held to be a necessary element of piracy, to distinguish the crime from political activity'.¹⁰²⁸ Even when pirates claimed to have the backing of a state, they often acted out of self-interest. The reprisal system thrived on ambivalence and, as Anderson writes, 'The path from that action [reprisal] to random piracy is short and clear'.¹⁰²⁹ Examples from the Admiralty Court records make it abundantly clear that in many cases the law was used as a cover by pirates to capture and rob indiscreetly. Overall, defining piracy in the sixteenth century is difficult; the legality of each act of piracy must be established on a case-by-case basis. So, while questions of legality are important, this chapter will focus predominantly on the impact of marine predation on fisheries.

5.3.1 Overview of Piracy in the Sixteenth Century

Before examining the specific details of how piracy impacted fisheries, this section will introduce a macro-overview of piracy events related to Ireland in the sixteenth century. This overview will

¹⁰²² Connie Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 44.

¹⁰²³ David J. Starkey, "Voluntaries and Sea Robbers: A Review of the Academic Literature on Privateering, Corsairing, Buccaneering and Piracy", *The Mariner's Mirror* 97, no. 1 (2011).

¹⁰²⁴ Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 44

¹⁰²⁵ *Ibid.*, p. 45.

¹⁰²⁶ John C. Appleby, *Under the Bloody Flag : Pirates of the Tudor Age* (Stroud: The History Press, 2009), p. 13.

¹⁰²⁷ Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 44.

¹⁰²⁸ J. T. Anderson, "Piracy and World History- An Economic Perspective on Maritime Predation", *Journal of World History* 6, no. 2 (1995), p. 177.

¹⁰²⁹ *Ibid.*, p. 177.

be based on entries in John Appleby's, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*.¹⁰³⁰ This calendar and its limitations were discussed already in Chapter 1; as were the QDA methods used to process the data. The court's records are the best records available to explore broader trends in piracy across the century. The data presented here is not meant to survey every act of piracy that occurred in the period, but rather provide an indication of what periods across the century saw the most piracy related to Ireland and what the spatial distribution of that piracy was.

To that end, Figure 5.1 below shows the frequency of piracy events around Ireland per year based on the calendar.¹⁰³¹ There were 89 piracy events recorded in total, with the first event happening in 1546 and the series ending in 1603. Immediately, the data shows that piracy events remained relatively consistent until the final two decades of the century when a massive spike is observed. Out of 89 events, 41 occurred in the last decade of the century. In some years, no records have survived, and consequently, no events were recorded. In that respect, the survival of records has influenced this trend; however, enough records have survived to show which periods experienced the worst violence.

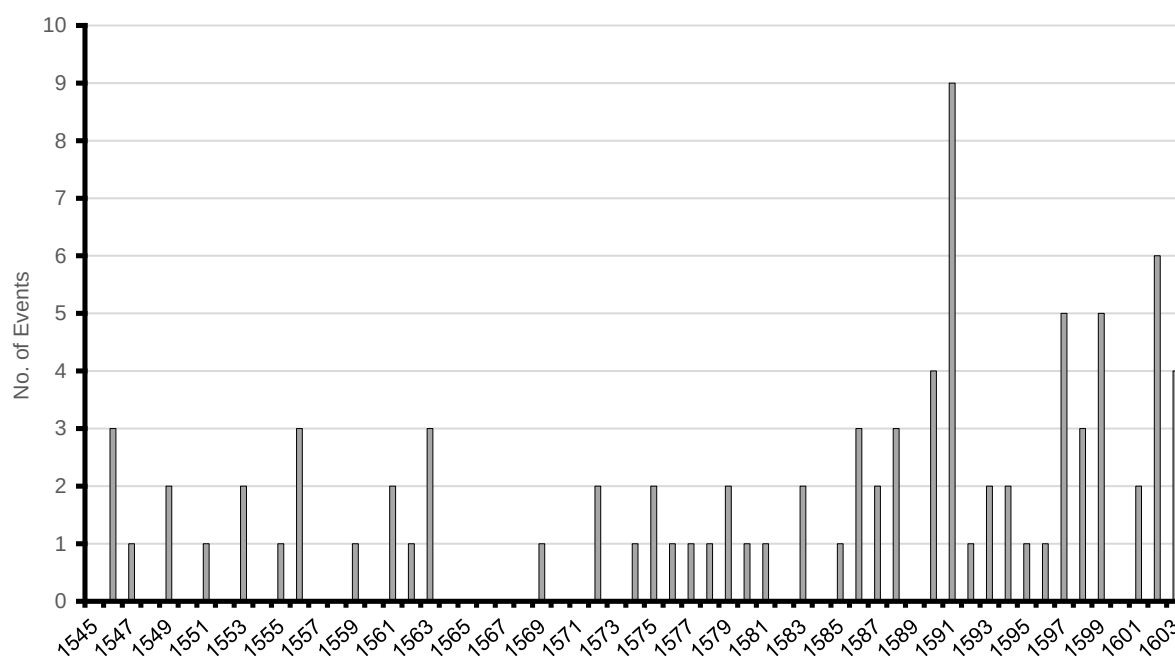


Figure 5.1 – Piracy Events around Ireland, 1546-1603.¹⁰³²

¹⁰³⁰ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*; HCA 13, The High Court of Admiralty: Instance and Prize Courts: Examinations and Answers, 1536-1826.

¹⁰³¹ Murphy, *A Calendar of Material Relating to Ireland from the High Court of the Admiralty, 1641-1660*.

¹⁰³² During this research piracy events up to 1641 were recorded, but this section will focus on events that took place from 1536 to 1603.

Attempts were made with the data to distinguish between lawful acts of prize taking and illegal acts of piracy, from the point of view of the English court. As discussed above pirates could operate in legal grey areas, but these determinations were based on how the English court would have viewed the event. Making these determinations is made more difficult because many cases were in dispute and the judgements were kept in another record series.¹⁰³³ Nevertheless, based on the available information, the vast majority appeared to be of an illegal nature (72) according to the Court's point of view, with only nine events appearing to be legal and a further eight impossible to determine.¹⁰³⁴ So in the majority of cases, it does appear that these events were illegal acts of piracy against innocent merchants and fishers.

Based on a review of the witness testimony, in 57 of the events, the pirate ships' crews were predominantly English. In a further nine events the crews were a blend of Irish and English, and yet another nine ships had French crews. The remainder encompassed a mixture of Scottish, Irish, Welsh, and Spanish crews. The victims' crews were most commonly of French nationality, with 19 French ships being assailed in total. A further 17 ships with Irish crews, and 15 with English were attacked by pirates. Nine German-crewed ships were also assaulted, along with six from Spain.¹⁰³⁵ The data shows that English pirates attacked Irish and French crews 11 times each. English pirates also attacked English victims in five instances. Overall, the data suggests that pirates were opportunistic and attacked ships from all different nationalities, friend or foe. In many examples, pirates who had letters of marque against one particular nation attacked ships indiscriminately, including ships from their own country.

The targets varied across events: in 72 cases, the targets were merchant traders; in 12 cases the targets were fishers; and in three instances, pirates themselves.¹⁰³⁶ Not all these examples had a direct impact on Irish fisheries, but this data does show that piracy was a constant threat throughout the sixteenth century to all merchants and fishers. Additionally, by mapping out these instances of piracy, we can build a picture of which parts of Ireland and its adjacent waters were most impacted by this threat. Map 5.3 shows the 87 instances of piracy where the location of the attack was mentioned in the witness statements.

¹⁰³³ Judgements were kept in a separate record series, which are not included in the Examinations series. It is very difficult to cross reference cases among the different record series.

¹⁰³⁴ Legal as defined in the jurisdiction of the deponents, several were reported to be legal prizes in France for example.

¹⁰³⁵ A few ships from the Netherlands (4), Scottish (4) and several other ships had mixed crews.

¹⁰³⁶ One further victim of piracy was a town, and another was unidentifiable.



Map 5.3 – All Piracy Events Relating to Ireland, 1546-1603.

The instances of piracy recorded for this study were all related to Ireland in some way but did not necessarily take place in Irish waters. Piracy events outside Ireland were included because Irish ships captured in England or Spain would still have a direct economic consequence back in Ireland. Irish maritime industry could be influenced by events taking place far from Irish coasts. National borders did not constrain pirates, and during this period, piracy was a problem across Europe. Nevertheless, the data does still show a high concentration of piracy events around the Irish coast, particularly in Munster. There is another concentration on the coast of

the English West Country. Further events were recorded all down the coast of France, Portugal, and Spain.

The coast of Munster and the West Country shared some common features. Both were rugged and peppered with numerous small bays and ports, were close to busy shipping lanes and provided markets for pirates to sell goods. Furthermore, they both lacked the control of a central power who could police the seas.¹⁰³⁷ In his examination of piracy in nineteenth-century Morocco, C. R. Pennell concludes that piracy was most likely to flourish where 'political and economic structures on the one hand and physical geography of the region on the other gave pirates the most opportunity.'¹⁰³⁸ Munster and the West Country had the ideal mixture of weak government control and good physical geography for pirates to operate in. Connie Kelleher has also conducted an extensive study of piracy on the Munster coast during the seventeenth century that highlights the key role geography and politics played in the flourishing of piracy in the region.¹⁰³⁹

Pirates also often waited near capes and other choke points to make capturing ships easier.¹⁰⁴⁰ These tactics are illustrated in the data, with capes such as Land's End in Cornwall, Cape Clear in Ireland and Cape Finisterre in northern Spain showing up as significant piracy hot spots. Other choke points, such as St George's Channel and the Straights of Gibraltar, also see a high frequency of attacks. Map 5.4 shows those instances of piracy that occurred in or around the coast of Ireland. Again, Munster saw the highest rate of piracy events over the century, with Cork being the most frequent location for piracy in Ireland, followed by Kinsale, Cape Clear and Waterford. We also see far more instances of piracy around towns; it was far easier for pirates to wait outside towns for ships to come to them rather than chase vessels on the open sea.

¹⁰³⁷ Appleby, *Under the Bloody Flag : Pirates of the Tudor Age*, p. 59; Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 31.

¹⁰³⁸ C. R. Pennell, "The Geography of Piracy: Northern Morocco in the Mid-Nineteenth", in *Bandits at Sea, A Pirate Reader*, ed. C. R. Pennell (New York: 2001), p. 66.

¹⁰³⁹ Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*.

¹⁰⁴⁰ C. M. Senior, *A Nation of Pirates: English Piracy in its Heyday* (Newton Abbot: David and Charles, 1976), p. 21.



Map 5.4 – Piracy Events on the Irish Coast, 1546-1603.

If pirates were targeting a particular town, then often all trade would cease in that area. Merchants would avoid the region if it were known that pirates were operating there, choosing instead safer waters in which to trade. Piracy produces the immediate economic effect of reducing the availability of goods reaching markets, but endemic piracy reduces the incentives for merchants or fishers to operate, or for others to invest in those industries.¹⁰⁴¹ For a small market like Ireland, the losses from piracy could have a devastating impact on coastal communities and individual merchants.

¹⁰⁴¹ Ibid., pp. 179-180.

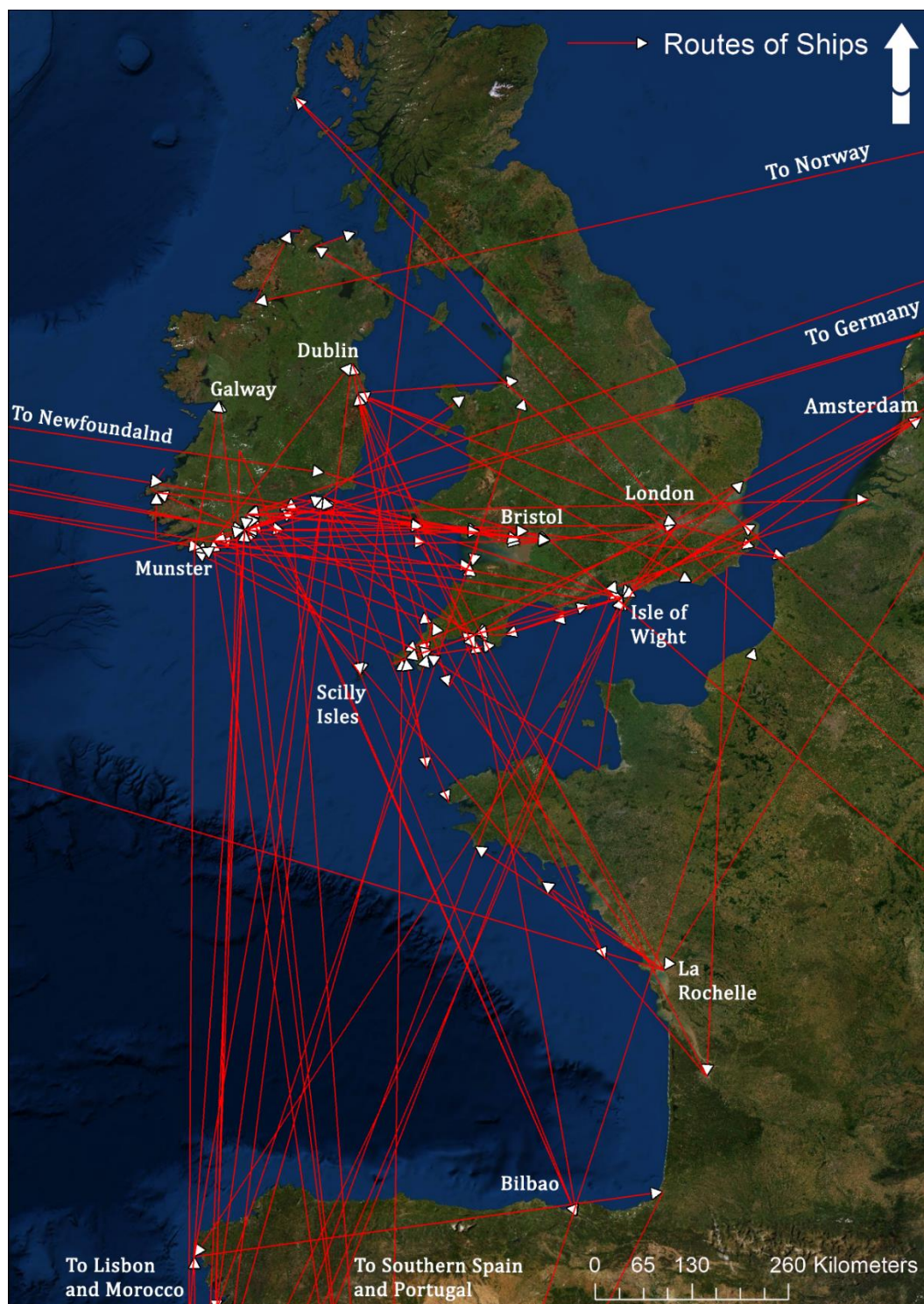
Map 5.5 found on the next page shows the routes taken by vessels before or after pirates assailed them. The routes on this map are indicated by straight lines between points of call for each ship. This map grants us a better understanding of what ship routes were most vulnerable to assault by pirates. As we might expect, there is a high level of traffic between the Munster ports and Bristol. We also see many voyages going to the smaller ports of the West Country. Specific ports outside this region, such as London and La Rochelle, also emerge as foci for voyages. This map also indicates that ships travelling south to Spain and Portugal were more frequently involved in piracy incidents than ships travelling east to the Low Countries or Germany. This pattern may reflect the popularity of these routes, but it is also true that conflict between England, Spain and France made this southern route particularly dangerous at different times throughout the sixteenth century. There were few instances of piracy for ships crossing the Atlantic, which is in part due to the few voyages overall. Every trans-Atlantic ship that was attacked was going to or returning from Newfoundland. Almost all these were French fishing vessels attacked on the Irish coast as they returned home from fishing.¹⁰⁴²

As this chapter shows, piracy had a detrimental impact on fisheries in Ireland and may have contributed to the shift of fisheries away from Ireland toward Newfoundland. However, Newfoundland was also not insusceptible to the dangers of piracy. According to Olaf Uwe Janzen, piracy was 'endemic' in Newfoundland during the closing decades of the sixteenth century, with Portuguese and Basque fishers significantly impacted by this violence.¹⁰⁴³ Other nations were not immune to piracy in Newfoundland either. For example, in 1586, the French port of Le Havre sent 33 ships to Newfoundland, three of which were captured by English pirates and one by pirates from La Rochelle.¹⁰⁴⁴ Still, the profitability of the fishery in Newfoundland seems to have made these risks acceptable.

¹⁰⁴² See for example, Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 109, p. 21, QFD ID 340; no. 240, pp. 46-47, QFD ID 381; no. 308, p. 64, QFD ID 67.

¹⁰⁴³ Olaf Uwe Janzen, "The Problem of Piracy in the Newfoundland Fishery in the Aftermath of the War of the Spanish Succession", *Northern Seas Yearbook* (1997), p. 2.

¹⁰⁴⁴ Data obtained through correspondence with Dr. Bernard Allaire of the NorFish project. Figures are based on notarial records from La Harve. Data yet to be published.



Map 5.5 – Routes of Ships Assailed by Pirates, 1546-1603.

Other fisheries, such as the Dutch North Sea herring fishery, also experienced heavy losses from piracy in the sixteenth and seventeenth centuries.¹⁰⁴⁵ In 1583 Spain captured harbours

¹⁰⁴⁵ James D. Tracy, "Herring Wars: The Habsburg Netherlands and the Struggle for Control of the North Sea, ca. 1520-1560", *The Sixteenth Century Journal* 24, no. 2 (1993).

along the Flemish coast and began to send out pirates to target Dutch, English and French shipping and fisheries. From 1583-1607, the Spanish sent out an average of 15 to 20 ships each year, and from 1621 to 1647 they sent over 100 ships annually some years.¹⁰⁴⁶ The fishing fleets of Dunkirk, Blankenberge, Nieuwpoort and Ostend all experienced a substantial decline in the sixteenth and early seventeenth century due to the actions of these Spanish-sponsored pirates.¹⁰⁴⁷

5.3.2 The Impact of Piracy on Fisheries

Having conducted a thorough overview of piracy in the sixteenth century, we can explore specific examples that highlight its impact on Irish fisheries. This section makes use of material from the Admiralty Court and the Irish State Papers. Piracy had been a problem in the Irish sea for centuries before 1500.¹⁰⁴⁸ However, in the fifteenth century, there were increasing numbers of Breton and Spanish pirates operating around Ireland. This increase partly occurred because of an upturn in trading traffic between Ireland, Brittany, and Spain.¹⁰⁴⁹ In response, the English government initiated a bounty system to encourage mariners to fight pirates. A statute passed by the Irish Parliament in 1460 stated that Breton, Spanish and French pirates frequently came to Ireland 'to rob, spoil and take and slay, as well merchants as fishermen'.¹⁰⁵⁰ The Parliament requested Irish shipowners to take up 'the protection of the sea and the merchants and fishermen of the said land, from spoil hurt or robbery of their merchandises and fish'. Those shipowners who patrolled for pirates received as payment, 5s. from every ship that went 'faske fishing' and from every small fishing boat, they would get 6s. 8d. Additionally, it was ordered that 'sea wardens' should be put out to sea from Easter to Michaelmas and instructed not to allow 'merchants or fishermen to be hurt thereon'.¹⁰⁵¹ The extent to which vessels took up this offer is unclear, but the necessity for such measures illustrates the extent of the problem during this period.

While piracy had always been a problem, from the 1540s onwards, the number of piracy incidents related to Ireland rose sharply. This upsurge was in part caused by a war between

¹⁰⁴⁶ A. P. van Vliet, "The Influence of Dunkirk Privateering on the North Sea (Herring) Fishery During the Years 1580–1650", in *The North Sea and Culture*, ed. J. Roding and Heerma L. van Voss (Leiden: 1996), p. 155.

¹⁰⁴⁷ *Ibid.*, p. 164.

¹⁰⁴⁸ O'Neill, *Merchants and Mariners in Medieval Ireland*, pp. 119-122.

¹⁰⁴⁹ *Ibid.*, p. 122.

¹⁰⁵⁰ Berry, *Statute Rolls of the Parliament of Ireland in the Reign of King Henry VI*, 38. Henry VI, A.D. 1460, p. 671.

¹⁰⁵¹ *Ibid.*, 38. Henry VI, A.D. 1460, p. 672.

France and England, which broke out in 1542. In 1544 the Lord Justice, William Brabazon, reported that ‘pirates and Bretons now keeping on these coasts’.¹⁰⁵² As this war progressed, both sides issued letters of marque that empowered pirates to capture ships of the enemy. An example of a French letter can be found in the Irish State Papers; written in 1546, it gave licence to Captain Jehan le Gras and the crew of the *Petit Regnard*, a 35-ton vessel, ‘to make war upon the King’s enemies’.¹⁰⁵³ The English would have issued similar letters to their ships. However, as mentioned, a multitude of examples illustrate that pirates often ignored the constraints of such letters and instead attacked targets indiscriminately. For example, in July 1548, the Mayor of Youghal wrote to the Lord Deputy, recounting that a pirate named Smith ‘attacked our returning fishing fleet’.¹⁰⁵⁴ In July 1548, the people of Kinsale informed the Lord Deputy that a plague had caused ‘great mortality’ in the town. They reported that the ‘port has been our lifeline, but now it is blocked by Eagle’s pirates who prevent food supplies from reaching us’.¹⁰⁵⁵ These accounts make no mention of the pirates being French and give every indication that they were English.

In 1557 a mariner called John Wallwyn had his deposition taken in the English Admiralty court. He reported that his former captain, Thomas Borrowe from Dublin, prepared his ship, the *Anne*, ‘to spoil and rob friends and enemies’ following the outbreak of war between France and England in 1556. Borrowe attacked an English ship called the *Moon* near Land’s End in May 1557 but was captured and taken to Plymouth to be tried as a pirate.¹⁰⁵⁶ Another witness claimed Borrowe, and his crew had ‘acted as rovers’ and attacked several friendly Irish ships around Waterford before their capture.¹⁰⁵⁷ Borrowe’s crew had a different version of events to tell, which also provides us with some noteworthy details on how these pirate ships operated.

According to William Denny, one of Borrowe’s crewmates, the *Anne* had formerly been a Spanish ship but had sunk while coming into Drogheda in 1557. Borrowe and others had bought, floated, and repaired the boat before sailing it to Waterford. At Waterford, they heard that war was declared between England and France, so they fitted the ship out with ordnance and recruited a crew of ‘60 soldiers and mariners’. They were then apparently commissioned by the Lord Deputy to ‘spoil and rob’ all French and Scottish ships that came near the Irish coast.¹⁰⁵⁸ In Denny’s account, the *Anne* did not attack any friendly ships but was accosted by

¹⁰⁵² Steven and Murray, *C.S.P. Ire., Tudor Period 1509-1547*, no. 691, p. 387.

¹⁰⁵³ *Ibid.*, no. 717.7, p. 400.

¹⁰⁵⁴ Lennon, *C.S.P. Ire., Tudor Period 1547-1553*, no. 27, pp. 9-10, QFD ID 1547.

¹⁰⁵⁵ *Ibid.*, no. 29, p. 10.

¹⁰⁵⁶ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 87, pp. 16-18, QFD ID 339.

¹⁰⁵⁷ *Ibid.*, no. 97, p. 20, QFD ID 339.

¹⁰⁵⁸ *Ibid.*, no. 91, pp. 18-19, QFD ID 339.

the *Moon* without provocation.¹⁰⁵⁹ What makes Dennam's account implausible is that the war with France was only declared in June 1556, while the *Moon* had captured Borrowe in May.¹⁰⁶⁰ In this case, it was likely the *Anne* was acting illegally, but this example illustrates the ambiguity that many pirates operated under and the widespread violence and confusion that existed during times of war.

Of course, French pirates also had an impact, and the general situation put many fishing towns in difficulty. In October 1548, the Mayor of Waterford wrote, 'no shipping dares to come to this coast because of the menace of piracy is to the detriment of this city, the lifeblood of which is trade'.¹⁰⁶¹ Then in August the Mayor recounted that 'piracy has cost us twice as much as the losses we sustained in the recent wars with France'.¹⁰⁶² The problem continued into the next year when the Mayor penned another letter to the Lord Deputy, stating 'during these past three years we have been greatly troubled by pirates' and that foreign trade, on which the town relied, had 'been greatly hindered also'.¹⁰⁶³ While none of these accounts specifically mention the fisheries, it is safe to assume the piracy impacted them too, as well as the trade of fish from the town. As shown in Chapter 4, the export of fish declined markedly in the 1540s; the high level of piracy at this time may help explain why.

Other towns on the south and east coasts were suffering from piracy around the same time as well. In January 1549, Walter Crowley reported to the Lord Deputy that many ships had been taken in Cork harbour and that 'piracy has greatly disrupted trade'. He then requested 'royal shipping be dispatched to counter the pirates and apprehend them'.¹⁰⁶⁴ John Goldsmith, in August 1548, wrote to the Lord Deputy, reporting that Captain Logan, a Scot, was in the vicinity of Lambay and Howth Head near Dublin. A ship had already been captured, along with 'two or three other small boats that were bound for the fisheries at Carlingford'. He continues: 'fishermen or travellers to England dare not venture out of port'.¹⁰⁶⁵

Piracy not only impacted Irish fishers but those who visited Irish waters. In a deposition from 1551, Dominic de Gryber recounts that in December 1550 two pirate ships - one Irish and one English - came into Youghal and brought with them a ship they had captured at sea. The pirates claimed that they found the ship at sea 'with no creature aboard her' and therefore could claim

¹⁰⁵⁹ Ibid., no. 91, pp. 19, QFD ID 339.

¹⁰⁶⁰ Ibid., no. 87, pp. 16-18, QFD ID 339.

¹⁰⁶¹ Lennon, C.S.P. *Ire., Tudor Period 1547-1553*, no. 112, p. 31.

¹⁰⁶² Ibid., no. 59, p. 17.

¹⁰⁶³ Ibid., no. 211, p. 64

¹⁰⁶⁴ Ibid., no. 189, p. 52.

¹⁰⁶⁵ Ibid., no. 78, p. 22, QFD ID 607.

it as a legal prize.¹⁰⁶⁶ However, De Gryber said he knew it was a Spanish ship from Biscay because he had seen it fishing at Baltimore the previous year, which shows that the pirates were lying.

Instances of piracy decreased during the 1560s and 1570s, primarily due to the absence of war between England and the other major European powers. However, there were still scattered incidents that impacted fisheries. For example, in 1577, an English ship captained by William Smithe of Bristol went on a fishing voyage to Waterford, only to be captured in December by English pirates and taken to the Isle of Wight.¹⁰⁶⁷ As discussed earlier, during these decades, plans for plantation in Munster were regularly proposed, and many of these schemes listed preventing piracy among their benefits. These included the proposal from Humphrey Gilbert and others who claimed that establishing English towns on the coast of Munster would discourage 'European pirates' from visiting the coast.¹⁰⁶⁸ In 1573 another plan for settling the Munster coast was put forward, and again the authors claimed that 'numbers of ravening pirates (which be there for the most part succoured) shall be utterly scattered and discouraged'.¹⁰⁶⁹ There were several more plans proposed with similar benefits listed among their motivations. It would not be until the following century that these plans were actually enacted, but, far from discouraging piracy at that time, many of the towns established by the English settlers in Munster became centres for piracy.¹⁰⁷⁰ Baltimore, for example, was synonymous with piracy in the early seventeenth century, which may have in part led it to be sacked by Algerian pirates in 1631.¹⁰⁷¹

We know comparatively little about piracy outside the English parts of Ireland, but for some Gaelic clans piracy was a key part of their maritime operations. As Connie Kelleher writes 'predation on water was a feature of Gaelic-Irish rule throughout the millennia'.¹⁰⁷² By the sixteenth century the main Gaelic Irish pirates were operating on the more remote west coast.

¹⁰⁶⁶ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 38, p. 8, QFD ID 637.

¹⁰⁶⁷ *Ibid.*, no. 218, p. 43.

¹⁰⁶⁸ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 273, p. 112, QFD ID 662 & no. 327, p. 131, QFD ID 666.

¹⁰⁶⁹ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 507, p. 302, QFD ID 690.

¹⁰⁷⁰ John C. Appleby, "A Nursery of Pirates: The English Community in Ireland in the Early Seventeenth Century", *International Journal of Maritime History* 2, no. 1 (1990), p. 2.

¹⁰⁷¹ For a popular account of events, see; Theresa Denise Murray, "Baltimore to Barbary: The 1631 Sack of Baltimore", *History Ireland* 14, no. 4 (2006); see also, K. Pluymers, "'Pirates' and the Problems of Plantation in Seventeenth-Century Ireland", in *Governing the Sea in the Early Modern Era: Essays in Honor of Robert C. Ritchie*, ed. Peter C. Mancall and Carole Shammas (San Marino: Huntington Library Press, 2015).

¹⁰⁷² Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 36.

As mentioned in Chapter 2, the O'Brian clan controlled the Aran Islands and used their strategic position to extract a tribute of wine from the town of Galway in exchange for keeping Galway Bay free of pirates. A report from 1400 also tells us that the clan engaged in piracy themselves, using their galleys to engage in 'spoiling of the king's legies'.¹⁰⁷³

The O'Malleys of Mayo were also known for their piratical activity.¹⁰⁷⁴ In 1601 Sir George Carew complained of Irish pirates around Limerick and on the River Shannon. He claimed they had 'blocked up the river from trade' and prevented Limerick's merchants from trading.¹⁰⁷⁵ In response, it was suggested that English galleys should be sent to the west of Ireland to 'keep the sea coasts from the O'Malies and other rebels'. The authors claimed the clan made a living 'by robbing poor fishermen and others that pass in small vessels, to the great hindrance of the common wealth'.¹⁰⁷⁶ The O'Malleys also produced the most famous of all Irish pirates, Grace O'Malley, who has been characterised as the 'pirate queen' in modern times.¹⁰⁷⁷ That title may be an exaggeration, but it is clear that Grace and her clan continued to partake in piracy in the later sixteenth century. Connie Kelleher writes that for the O'Malleys and other Gaelic clans, piracy was a means to exert control over their coastal territory and help them survive in the face of English encroachment.¹⁰⁷⁸

In 1568 an English captain, George Thornton, reported to William Cecil that if circumstances allowed, he would fit out his ship for the 'apprehending the remaining pirates in the west of Ireland'.¹⁰⁷⁹ This suggests that pirates, likely including the O'Malleys, continued to operate at that time. On the whole, we lack the sources to quantify the piratical activities of the Gaelic Irish on the west coasts of Ireland. However, it seems likely that piracy the Celtic and Irish seas had a greater economic impact overall. These seas were the most heavily trafficked regions on the Irish coast and had far more opportunities for pirates to make valuable captures.

Most pirates did not always operate as pirates. Pirate crews and pirate vessels could at other times be fishers, or merchants. The captain or owners of a boat often decided how to use their vessel year on year depending on what seemed most opportune. The case of John Callice, a Welsh pirate, illustrates this. Callice was implicated in numerous instances of piracy during the

¹⁰⁷³ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 127.

¹⁰⁷⁴ *Ibid.*, p. 127.

¹⁰⁷⁵ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 9: Mar-Oct 1600*, no. 113, p. 245, QFD ID 1290.

¹⁰⁷⁶ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 265, p. 259, QFD ID 1424.

¹⁰⁷⁷ Mary O'Dowd, "O'Malley, Gráinne [Grace] (fl. 1577–1597), Chieftain's Wife and Pirate" (Oxford University Press, 2008).

¹⁰⁷⁸ Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*, p. 73.

¹⁰⁷⁹ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 149, p. 67, QFD ID 658.

1570s, including the capture of the *Red Lion* of Irvine on the Irish north coast in 1577. The *Red Lion* had been carrying a cargo of salmon, herrings, and salt hides at the time.¹⁰⁸⁰ However, Callice was also a fishing captain. The year before in 1576 he was reported to be 'bound to Newfoundland on a fishing voyage' by Nicholas Herbart, a former crewmate.¹⁰⁸¹

During the early 1580s, instances of piracy between England and Spain began to increase, and this had an impact on Ireland as well. In 1581 a Spanish ship boarded a fishing boat near Kinsale and captured 'half of the skilful fullest mariners to use for pilots'.¹⁰⁸² This entry illustrates that fishers had value to pirates beyond any monetary value of their cargo. Fishers knew their home coasts very well and, if captured, could be pressed into service. In fact, after capture, many suspected pirates claimed they had been forced into the service of pirate captains unwillingly and had had no choice but to participate. For example, in 1610, a mariner by the name of Roger Salter was apprehended for piracy and claimed that while he was at Baltimore, a pirate crew forcibly carried him aboard their ship and got him drunk. According to Salter, by the time he had woken up, the ship had sailed, and he had no choice but became a crew member.¹⁰⁸³ Similar stories were told by other suspected pirates as well.¹⁰⁸⁴

As discussed in the previous chapter, during the Second Desmond Rebellion and Nine Years War, famine struck parts of Ireland several times. During these periods, the problem of piracy made bringing in supplies to relieve the famines worse. In 1582 the Lord Deputy, Arthur Grey, reported to London that famine prevailed in Munster and that he feared ships sent to relieve the shortage had 'perished in the tempests or by pirate'.¹⁰⁸⁵ Later in 1586, it was reported that North Wales was 'a place lately of great resort of pirates' which continued to hinder supplies to Ireland.¹⁰⁸⁶ Piracy again severely impacted fishing towns on the Munster coast during this period. In 1586, for instance, an English captain reported that 'many harms have been done of late to the town of Kinsale by pirates and men of war'.¹⁰⁸⁷

From the mid-1580s English merchant ships began to be seized in Spanish harbours. In response to this, the Admiralty in England issued letters of reprisal to reclaim the losses inflicted

¹⁰⁸⁰ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 206, p. 40, QFD ID 346.

¹⁰⁸¹ *Ibid.*, no. 201, p. 40.

¹⁰⁸² Christopher Walter, Mayor, to the Lord Deputy, 18 Mar 1581, SP 63/81 f.75, QFD ID 1000.

¹⁰⁸³ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 1223, p. 296.

¹⁰⁸⁴ *Ibid.*, see no. 1205 and its related entries for more.

¹⁰⁸⁵ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 2: 1574-1585, no. 22, p. 353, QFD ID 1012.

¹⁰⁸⁶ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 3: 1586-July-1588, no. 1, p. 51, QFD ID 1056.

¹⁰⁸⁷ *Ibid.*, no. 71, p. 190, QFD ID 1059.

on English merchants. Acts of piracy by both the Spanish and English intensified and eventually escalated into all-out war and the sailing of the Spanish Armada in 1588.¹⁰⁸⁸ In response to the threat of piracy, the English authorities sought to protect Irish fishing towns.

In 1583 Waterford initiated a tax on fishers for the building of fortifications to protect shipping coming and going from the town.¹⁰⁸⁹ The taxes include a mease of fish from every herring boat and the 'principal' fish from every other vessel.¹⁰⁹⁰ Only in December 1587 was the fort's construction completed amidst fear of Spanish attack. At that time Geoffrey Fenton reported its conclusion, saying its purpose was to defend 'the harbour of Waterford, and the fleet resorting thither for trade of fishing'.¹⁰⁹¹ In the same month, Sir John Perrot reported that 'the Spaniards intend to come to this realm this winter', and if they 'had sent but six or eight ships to the haven of Waterford at any time since Michaelmas they would have taken above 200 sails of barks that came thither a fishing'.¹⁰⁹² Perrot also notes that in previous years the fishery had been far larger.

The new fort does not seem to have been sufficient because, in September 1589, the Privy Council asked that ships be sent to Waterford for the 'defence of the ships and vessels fishing about the haven'.¹⁰⁹³ Then in October, the Lord Deputy, William FitzWilliam, wrote that the new fort at 'Duncannon could not resist a strong pirate' and that the herring fishing at Waterford 'doth not endure two months' due to the piracy. He too asked for ships to be stationed there to 'keep away pirates, of whom there are too many'.¹⁰⁹⁴ Another report from October suggests that Waterford was only 'four days sail' from Spain with a fair wind and again called for ships 'to protect the fishing and chase away pirates'.¹⁰⁹⁵

The new defences built during the 1580s are visible on a map from 1591 shown over the page (Map 5.6). The map shows the approach to Waterford city with a sizeable new fortification built at Duncannon, close to the fishing village of Ballyhack. The map also shows the new tower at

¹⁰⁸⁸ Kenneth R. Andrews, *Elizabethan Privateering : English Privateering During the Spanish War, 1585-1603* (London: Cambridge U.P., 1964), p. 3.

¹⁰⁸⁹ Brewer and Bullen, *Cal. Car. MSS - Misc Docs - Vol 6 - Book of Howth*, p. 467.

¹⁰⁹⁰ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 583, p. 584, QFD ID 1465.

¹⁰⁹¹ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588*, no. 27, p. 441, QFD ID 1077.

¹⁰⁹² *Ibid.*, no. 35, p. 447, QFD ID 1079.

¹⁰⁹³ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 4: Aug 1588-Sept 1592*, no. 67(1), p. 243, QFD ID 1112.

¹⁰⁹⁴ *Ibid.*, no. 40, p. 254, QFD ID 1114.

¹⁰⁹⁵ *Ibid.*, no. 34, p. 252, QFD ID 1113.

Hook Head.¹⁰⁹⁶ The case of Waterford over this period illustrates the threats fishing towns faced from piracy and the lengths the authorities went to in protecting them. However, in this case, the fishers themselves were taxed to pay for these defences. We also know from Perrot's report in 1587 that English fleets still frequented the area to fish, which may have motivated the English to protect Waterford over other fishing towns.¹⁰⁹⁷ Additionally, as mentioned earlier, food security was a primary concern in this period, and Waterford was one of the largest producers of fish in Ireland which may have also motivated the building of static defences and the posting of ships there.



Map 5.6 – Cittie of Waterford with the New Fortifications There, 1591.¹⁰⁹⁸

The conflict between Spain and England continued into the next decade, as did the instances of piracy on the Irish coast. In May 1594, a Spanish pirate ship was loose on the Munster coast,

¹⁰⁹⁶ These features are described in the map's description, "The New Description of the City of Waterford with the New Fortifications There..." 1591 (Hardiman atlas, Trinity College Dublin, Digital Collections: IE TCD MS 1209/64).

¹⁰⁹⁷ Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 3: 1586-July-1588*, no. 35, p. 447, QFD ID 1079.

¹⁰⁹⁸ "The New Description of the City of Waterford with the New Fortifications There... (Hardiman Atlas)".

capturing and robbing several fishing boats near Dungarvan and Waterford.¹⁰⁹⁹ Then during the following year, two Barques were taken by Spanish pirates near Dublin.¹¹⁰⁰ In January 1595, another Spanish ship captured and interrogated fishers around Dungarvan. This last attack seems to have been a scouting mission more than an act of piracy, but we can imagine the fear of Spanish attack deterred fishers in the region.¹¹⁰¹ As mentioned earlier, in January 1597, the herring fisheries across Ireland failed to produce any catches.¹¹⁰² The failure of the fishing may have been caused by natural fluctuations in climate or the herring stocks, but it is also possible that the continual attacks by pirates had prevented or dissuaded fishing fleets from going to sea.

Piracy could have a devastating impact on the fortunes of individual merchants as well. In January 1597 in Dublin, Nicholas Weston loaded his ship, the *Lion*, with hides, linen cloth and 4,000 rotten fish. They sailed for Bilbao, Spain, a potentially dangerous choice given the war between England and Spain at the time. The ship was captured off the Scilly Isles by an English pirate, Captain Norris. Norris stole some goods and let the ship carry on its way to Bilbao, where it unloaded its cargo and took in 55 tons of iron to be brought back to Dublin. However, before they could complete their journey, the ship was captured again between Cork and Youghal on 12 June by Alexander Vaughan, another English pirate. Vaughan let the crew go near Kinsale and took the ship off to Wales.¹¹⁰³ More of Weston's ships suffered piratical attacks in the following years, and the losses eventually forced him out of the fish trade altogether.¹¹⁰⁴ Weston's case illustrates that fishing and merchant ventures were high risk and if a merchant suffered several losses in this fashion, his whole business could be put in jeopardy.

The fortunes of one merchant could also discourage others from entering a trade. In a later case from 1612, a Wexford merchant was captured in Newfoundland by another English pirate. After this incident, the Lord Deputy, Sir Arthur Chichester, urged the privy council to compensate the merchant because this event is likely 'to deter all others, of this Country, from such like adventures thither'.¹¹⁰⁵ Weston's is one of the better-recorded cases, but other fishers

¹⁰⁹⁹ Hamilton, C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 5: Oct 1592-June 1596, no. 5, p. 251, QFD ID 1154; no. 5, 252, QFD ID 1157.

¹¹⁰⁰ C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 3: 1586-July-1588, no. 45, p. 331, QFD ID 1164.

¹¹⁰¹ Ibid., no. 24, p. 293, QFD ID 1160.

¹¹⁰² Sir Henry Wallop to Burghley, 18 Jan 1596-7, SP 63 197 f.87, QFD ID 1204; The Lords Justices Loftus and Gardener and Council of Ireland to the Privy Council, 29 Nov 1597, SP 63/201 f.175, QFD ID 1230.

¹¹⁰³ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 427, pp. 92-93, QFD ID 88.

¹¹⁰⁴ "The Fishing Ventures of Nicholas Weston of Dublin", *Dublin Historical Record* 39, no. 4 (1986), p. 153. Weston's other voyages and misfortunes will be discussed in the next chapter.

¹¹⁰⁵ Ibid., p. 154, quoting from the Chichester Letter-Book.

and merchants would have experienced similar losses from piracy throughout the sixteenth and early seventeenth centuries.

This study has shown that it is possible to formulate an advanced understanding of the patterns and frequency of piracy by compiling events from qualitative sources. The exercise illustrates that piracy was a constant throughout the sixteenth century in Irish and adjacent waters, but that the problem became more acute during times of war as countries intentionally unleashed pirates on foes, and unintentionally on friends. Through the examination of both the Admiralty Court and State Paper records, it is clear that piracy harmed fisheries in Ireland. Piracy could ruin the fortunes of individual merchants and, on the broader scale, the presence and actions of pirates could destroy the trade of towns and discourage fishers and merchants from operating at all. Ultimately, the lack of a safe maritime environment in which to operate hampered the economic sustainability and development of Irish fisheries in the sixteenth century and contributed to the decline of the industry. Unfortunately for Irish mariners, the situation would deteriorate even further during the first decades of the seventeenth century.¹¹⁰⁶

5.4 Overall Conclusion

Terrestrial warfare disrupted healthy economic life; it destroyed towns and infrastructure, and the violence and related famine devastated populations at different times in the sixteenth century. All of this had a caustic impact on fishing enterprises and constrained them at a lower level. Fisheries were also of prime strategic importance at times, helping to feed garrisons and keep armies in the field. As the final chapter will show, due to the failure of fisheries in Ireland, the import of new supplies of fish from Newfoundland became of prime importance. The study of conflict and fisheries illustrates that fish was vital to the food security of different population groups in Ireland. For example, the loss of fisheries in Ulster toward the end of the sixteenth century undoubtedly contributed to famine conditions.

Moreover, during the sixteenth century, Ireland became a theatre in which the geopolitical conflicts of Europe played out. English involvement in Ireland pulled the island into conflicts with France and Spain, both of which increased the intensity of warfare in Ireland and made Ireland more liable to attack from continental pirates. Continental involvement in Ireland

¹¹⁰⁶ For more on this see, Senior, *A Nation of Pirates: English Piracy in its Heyday*; Appleby, "A Nursery of Pirates: The English Community in Ireland in the Early Seventeenth Century"; Pluymers, "'Pirates' and the Problems of Plantation in Seventeenth-Century Ireland" and Kelleher, *The Alliance of Pirates: Ireland and Atlantic Piracy in the Early Seventeenth Century*.

culminated with Spanish forces landing at Kinsale in 1601; the defeat of these forces effectively put an end to Gaelic resistance and led to the English domination of Ireland.

Ireland's fisheries were also a propaganda tool, used by English authors to expound the benefits of proposed plantation schemes. The language used by adventurers and planters was often hyperbolic and should not be read as a natural history of Ireland - but rather seen in the context of when it was written. Not only were fisheries used to promote plantation, but they were crucial to the economic success of some schemes, like those on the Bann. The desire to include fisheries in plantations and settlement meant that, in the sixteenth century, the Crown asserted its rights to these fisheries more than ever before. Not only were physical structures, like weirs, taken to be Crown property, but so too were whole rivers and stretches of coastline. The Crown's right to grant fisheries led to a dramatic overhaul in ownership, particularly for Gaelic fisheries.

The defeat of Gaelic Ireland allowed for ever broader and more ambitious plantation schemes in the seventeenth century. The migration and plantation of settlers in Ireland did not put an end to fisheries in Ireland, but it changed their character forever. For instance, in 1606, Sir Fineen O'Driscoll leased the town of Baltimore to Thomas Crooke, an English settler.¹¹⁰⁷ What had been one of the centres of Gaelic fishing became an English town, which, as mentioned earlier, became synonymous with piracy in the seventeenth century. The town would host prosperous fisheries again, but as mentioned, these were pilchard fisheries controlled by the new Earl of Cork, Richard Boyle.¹¹⁰⁸ Baltimore is one example, but it illustrates how the change in landownership impacted and ultimately shifted fishing in Ireland. The control of these resources not only impacted economic life but actual lives.

At the beginning of the sixteenth century, there existed a diverse range of fisheries in Ireland. The Gaelic Irish hosted a varied range of foreign fishers on their land, including fishers from England. Old English towns across Ireland also enjoyed a measure of peace and traded freely with England and Europe. However, by the end of the sixteenth century, things had changed. The English re-conquest of Ireland radically shifted the ownership and access to fisheries in former Gaelic areas. At the same time, the trade and fisheries in the towns in Munster were severely impacted by both terrestrial impact and piracy. The participation of English fishers and the availability of the English market contributed substantially to the prosperity of Irish fisheries early in the century. However, it was also the expansionist desires of the Tudor state that damaged and forced the decline of fisheries in late sixteenth-century Ireland. Some fisheries,

¹¹⁰⁷ MacCarthy-Morrogh, *The Munster Plantation*, p. 151.

¹¹⁰⁸ Nicholas Canny, "Boyle, Richard", *Dictionary of Irish Biography* (2009).

like those around Dublin, escaped the worst violence and did not change ownership. However, even here, trade was disrupted, ships were lost to pirates, and the failure of fisheries elsewhere in Ireland impacted food supplies. Ultimately, nowhere in Ireland escaped the direct impact of conflict and piracy throughout the century. Fisheries across the country would recover in the seventeenth century, but they would never regain their position as the dominant export industry of Ireland.

Chapter 6 – Provisioning, Consumption and Environment

“There was a fish in the sea found, formed like a man, and was kept with raw flesh and fish six months upon the land, and because it would not speak they threw it into the sea again, whereof it did much rejoice and make a great noise.”

Christopher St Lawrence, *The Book of Howth*, compiled between 1567-71.¹¹⁰⁹

6.1 Introduction

As the previous chapter outlined, conflict had a severe impact on the development of fisheries in Ireland across the sixteenth century. However, conflict was not the only force influencing fisheries across this century. The first part of this chapter examines how changing patterns of consumption and attitudes toward fish changed the trajectory of the industry in the sixteenth century. The main sources employed in this section are records of army rations and consumption. These records do not reflect well the diets of ordinary people, but they allow us to know what species of fish were commonly available and in what periods they were in short supply.

Furthermore, these army records allow us to determine when new fish products arrived in Irish markets. The exploitation of Newfoundland by European fishers in the sixteenth century fundamentally altered fish consumption on their home continent. This shift occurred in Ireland, too, as fish from Newfoundland became a crucial supply for the English army during the Nine Years War at the end of the sixteenth century. This section will examine the role of Irish merchants in the Newfoundland trade and how the importation of fish from Newfoundland shifted consumption patterns in Ireland. Finally, records of supplies to Dublin-based artisans, as well as Gaelic Irish poetry will be examined for what they can tell us about cultural and religious attitudes toward fish.

The second section of this chapter will seek to explore the influence sixteenth-century fisheries had on the natural environment, and in turn, the impact of the natural environment had on the trajectory of the fisheries. This section will explore if people in the past were aware of the fragility

¹¹⁰⁹ Brewer and Bullen, *Cal. Car. MSS - Misc Docs - Vol 6 - Book of Howth*, p. 238. For a full exploration of the Book of Howth see McGowan-Doyle, *The Book of Howth*.

of the aquatic environments they exploited and if they implemented measures to protect them. Additionally, this section will question if fisheries in the sixteenth century were sustainable and whether fishers with limited technology could overexploit and damage fish stocks? Finally, this section will explore what other historians have written about the role of fish migration in Irish history and offer new and more scientifically sound explanations for how climate and oceanographic change may have influenced the industry in the medieval and early modern periods.

6.2 Fish Consumption

6.2.1 Introduction

Studying the consumption of fish in the sixteenth century is challenging, and it is often difficult to determine what foods people from different social classes consumed daily. It is even more difficult to trace how consumption patterns changed across the century. There are several reasons for this, the principal among them being a lack of documentary sources that detail daily diets.¹¹¹⁰ Additionally, to date, Irish historians have also shown a lack of interest in the study of food or consumption in the early modern period.¹¹¹¹ However, new studies and projects are beginning to correct this. For example, Susan Flavin has used the Bristol Port Books to illustrate the importation of a growing diversification of foodstuffs and household items to Ireland toward the end of the sixteenth century.¹¹¹² Flavin is planning further research with the FoodCult Project at Trinity College Dublin.¹¹¹³ This project is looking to use untapped documentary sources, such as the domestic expenditure records of Sir William Fitzwilliam during his time in office in Ireland from 1558 to 1599.¹¹¹⁴ These records have great potential to tell us more about consumption in an elite household in sixteenth-century Ireland.

Archaeological evidence also has the potential to inform us further about the consumption of fish in the sixteenth century. As mentioned earlier, in a recent book chapter, Sheila Hamilton-Dyer discusses the current evidence available from fishbone assemblages uncovered in

¹¹¹⁰ Susan Flavin, "Food, Drink and Society in Sixteenth-Century Ireland: Cultures of Consumption", in *Becoming and Belonging in Ireland c.1200-1600*, ed. Eve Campbell, Elizabeth FitzPatrick, and Audrey J. Horning (Cork: Cork University Press, 2018), p. 214.

¹¹¹¹ L. M. Cullen, "Comparative Aspects of Irish Diet, 1550-1850", in *European Food History, a Research Review*, ed. Hans J. Teuteberg (Leicester: Leicester University Press, 1992), p. 52.

¹¹¹² Flavin, *Consumption and Culture in Sixteenth-Century Ireland: Saffron, Stockings and Silk*.

¹¹¹³ "FoodCult: Food, Culture and Identity in Ireland c. 1550-1650", <https://foodcult.eu/>.

¹¹¹⁴ Ada Kathleen Longfield, ed. *Fitzwilliam Accounts 1560-64 (Annesley Collection)* (Dublin: Irish Manuscripts Commission, 1960); "Fitzwilliam Manuscripts at Milton, England", *Analecta Hibernica* 4 (1932).

Ireland.¹¹¹⁵ This evidence shows a wide range of sea fish present at both coastal and more inland sites across Ireland. The dominant species uncovered in most medieval and late medieval sites were cod and hake. In most instances, whole fish were found on these sites, suggesting this fish was consumed locally and not processed for export. However, as mentioned earlier, a lack of sieving means that smaller bones of fish like herring were not collected on many sites. Despite this, Hamilton-Dyer writes that even on sites where sieving was conducted, few herring bones were found and concluded that it was likely not an item of everyday consumption in Ireland, with most herring caught by foreign vessels and exported.¹¹¹⁶ In contrast, this thesis has demonstrated that while foreign vessels did catch herring in Irish waters, it was also a crucial catch for many domestic Irish fisheries. Furthermore, this chapter will illustrate that herring was commonly eaten by many communities in Ireland and was not exclusively for export.

New forms of archaeological analysis also have the potential to better inform us about the diets of people in the past as well. Stable isotope analysis measures the levels of carbon and nitrogen isotopes in human remains.¹¹¹⁷ These levels can, in turn, tell us the balance of that individual's diet and, in relation to marine food, can reveal 'if, when and where marine fish became a dietary staple and by whom such fish were preferentially consumed'.¹¹¹⁸ Researchers have conducted stable isotope studies in many parts of Europe, such as the UK, Sweden and Denmark, but such research has yet to be done in Ireland.¹¹¹⁹ Stable isotope analysis methods have even been used to trace the spatial dimensions of the medieval European cod trade.¹¹²⁰ Other methods, such as the DNA analysis of fish and other organic remains, can show us the

¹¹¹⁵ Hamilton-Dyer, "Exploring the Contrast: Fish-Bone Assemblages from Medieval Ireland".

¹¹¹⁶ Ibid., p. 236. Although Hamilton-Dyer does state that the interpretation of the archaeological data may well change as new in the future and writes that 'there is great potential for further research' in the area. p. 237.

¹¹¹⁷ R. H. Tykot, "Stable Isotopes and Diet: You Are What You Eat", *Proceedings of the International School of Physics "Enrico Fermi" Course CLIV* (2004).

¹¹¹⁸ Gundula Müldner, "Marine Fish Consumption in Medieval Britain: The Isotope Perspective from Human Skeletal Remains", in *Cod and Herring, the Archaeology and History of Medieval Sea Fishing*, ed. J. H. Barrett and D. C. Orton (Oxford: Oxbow Books, 2016), p. 239.

¹¹¹⁹ Ibid.; D. C. Orton et al., "Stable Isotope Evidence for Late Medieval (14th-15th C) Origins of the Eastern Baltic Cod (*Gadus morhua*) Fishery", *PLoS One* 6, no. 11 (2011); Gundula Müldner and Michael P. Richards, "Fast or Feast: Reconstructing Diet in Later Medieval England by Stable Isotope Analysis", *Journal of Archaeological Science* 32, no. 1 (2005); Anna Kjellström et al., "Dietary Patterns and Social Structures in Medieval Sigtuna, Sweden, as Reflected in Stable Isotope Values in Human Skeletal Remains", *ibid.* 36, no. 12 (2009); Cassidy Yoder, "Let Them Eat Cake? Status-based Differences in Diet in Medieval Denmark", *ibid.* 39, no. 4 (2012).

¹¹²⁰ James H. Barrett et al., "Detecting the Medieval Cod Trade: a New Method and First Results" *ibid.* 35 (2008); James H. Barrett et al., "Interpreting the Expansion of Sea Fishing in Medieval Europe Using Stable Isotope Analysis of Archaeological Cod Bones", *ibid.* 38, no. 7 (2011); see too, Orton et al., "Stable Isotope Evidence for Late Medieval (14th-15th C) Origins of the Eastern Baltic Cod (*Gadus morhua*) Fishery".

origin of products traded long distances.¹¹²¹ In the Irish case, this could be used to trace the importation of foreign fish and perhaps identify fish in other countries that originated in Ireland. Fortunately for Irish researchers in the near future, the FoodCult project intends to apply these methods, and others such as organic residue analysis, in the Irish context.¹¹²²

The archaeological remains of shell middens also indicate that coastal people in Ireland consumed oysters since the Mesolithic period.¹¹²³ These people collected by hand all kinds of other shellfish and crustaceans from the intertidal zones of the coast.¹¹²⁴ The consumption of shellfish continued into the sixteenth century; we know from the work of Arthur Went that Dublin had an active oyster fishery that supplied the local fish market during the sixteenth century.¹¹²⁵ Furthermore, the remains of a shell midden in Dublin has been dated to the seventeenth century. Similar post-medieval middens have also been found in Kerry, Galway, Carlingford, and Sligo.¹¹²⁶ There are no records to suggest shellfish was exported from Ireland in large numbers in the sixteenth century, so we have to assume much of what was collected was consumed locally. However, as we will see in the next section, even by the sixteenth century, it is possible stocks of shellfish on the coast were in decline due to centuries of human exploitation.

In a short book chapter from 1992, Louis Cullen considered the historiography of the Irish diet from 1550 to 1850. At that time, Cullen wrote that Irish consumption history had been too focused on the role of the potato and the Great Famine of the 1840s.¹¹²⁷ Cullen also wrote that diet has been used by Irish historians to emphasise poverty and class distinctions, but few studies had taken a more analytical or detailed approach to the study of diet. Much of what Cullen wrote remains valid, but the field has also developed since the 1990s. For example, one of the broadest studies of Irish diet and consumption was undertaken by L. A. Clarkson and Margaret Crawford in their monograph covering the subject from 1500 to 1920.¹¹²⁸ Specifically, on the consumption of fish in the early modern period, Clarkson and Crawford write that fish was a 'useful adjunct to diets', but the bulk of the Irish diet was composed of food from cattle.¹¹²⁹

¹¹²¹ W. F. Hutchinson et al., "The Globalization of Naval Provisioning: Ancient DNA and Stable Isotope Analyses of Stored Cod from the Wreck of the Mary Rose, AD 1545", *R Soc Open Sci* 2, no. 9 (2015); Bastiaan Star et al., "Ancient DNA Reveals the Chronology of Walrus Ivory Trade from Norse Greenland", *roc. R. Soc. B.* 285 (2018).

¹¹²² "FoodCult: Food, Culture and Identity in Ireland c. 1550-1650", <https://foodcult.eu/>.

¹¹²³ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 29.

¹¹²⁴ *Ibid.*, p. 41.

¹¹²⁵ Went, "Oyster Fisheries".

¹¹²⁶ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 223.

¹¹²⁷ Cullen, "Comparative Aspects of Irish Diet, 1550-1850".

¹¹²⁸ L. A. Clarkson and Margaret E. Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920* (Oxford: Oxford University Press, 2001).

¹¹²⁹ *Ibid.*, p. 24.

Additionally, the authors assert that fisheries in Ireland were not developed substantially until English settlers arrived later in the sixteenth and seventeenth centuries, and then the fish caught was mainly exported and had little impact on local consumption.¹¹³⁰ As the current study has shown, fisheries in many parts of Ireland were highly developed prior to the arrival of English settlers in the sixteenth century, and the fisheries that those settlers did develop were not necessarily more productive than those that had come before. However, Clarkson and Crawford may be forgiven for not knowing more about the trajectory of fisheries in the sixteenth century as their study is extremely broad, and naturally, some details were missed. Furthermore, as their study highlights, records detailing the daily consumption of food in the sixteenth century are rare, but as we will see, some do exist.

Máirtín Mac Con Iomaire has written the only study to examine the history of seafood consumption in Ireland.¹¹³¹ Mac Con Iomaire's study mainly covers the recent history of fish consumption but does briefly review consumption from the Bronze Age onwards. Mac Con Iomaire has little to say about the sixteenth century but does note that Irish fishers had 'up-to-date ships' in 1540 and were quick to exploit the Newfoundland fisheries.¹¹³² He provides no source to substantiate this claim, and the current study found little evidence to suggest Irish fishers were heavily involved in Newfoundland during the 1540s. Mac Con Iomaire further writes that Hugh O'Neill 'saw the importance' of commercial fishing and considered forming an 'Irish navy' in the sixteenth century.¹¹³³ These statements clearly show a level of confusion and lack of understanding of the sixteenth century's political realities. Despite the lack of detail on the early modern period, this study does contain valuable information on diets from the nineteenth century onward that provides a helpful perspective on consumption in earlier centuries. In his review of Irish fisheries, Christopher Moriarty has also suggested that eel was a standard item of consumption in the sixteenth century due to the sizeable number of eel weirs in the country and the corresponding lack of exports.¹¹³⁴

¹¹³⁰ Ibid., p. 24.

¹¹³¹ Máirtín Mac Con Iomaire, "The History of Seafood in Irish Cuisine and Culture" (paper presented at the Proceedings of the Oxford Symposium on Food and Cookery, Devon, 2005).

¹¹³² Ibid., p. 3.

¹¹³³ Ibid., p. 4.

¹¹³⁴ Christopher Moriarty, "Fish and Fisheries", in *Nature in Ireland, A Scientific and Cultural History*, ed. Wilson John Foster and Helena C. G. Chesney (Montreal: McGill-Queens's University Press, 1997), p. 286.

6.2.2 Documentary Evidence for the Consumption of Fish in Ireland

Ration and supply records from the English army in Ireland provide some of the best evidence for fish consumption patterns in sixteenth-century Ireland. Clarkson, Crawford, and Flavin also utilised some purveyance records from the English army in their work, but these studies did not use these records to study the consumption of fish in detail.¹¹³⁵ The current study intends to explore these records more systemically and in greater depth than has been done before. The records of army supply can be used to indicate what foodstuffs were in short supply or available locally at different points throughout the sixteenth century. They can also allow us to trace broader changes in consumption and the arrival of new food items into Ireland. They provide further insight into what contemporaries perceived as a balanced or whole diet for a soldier. To understand the development and changing dietary patterns across the century, the following sections will take a primarily chronological approach.

In total, 202 entries concerning the consumption of fish were recorded for this study and entered into the QFD. These entries were primarily found in the Irish State Papers and relate to supplies for the English army; temporally they mostly come from the latter part of the sixteenth century.¹¹³⁶ However, as discussed in Chapter 2, the consumption of Irish fish by the English army dates to at least the thirteenth century when fish was sent from south-east Ireland to supply English forces on campaign in Scotland and Wales.¹¹³⁷ Additionally, Irish Chancery records from the mid-fourteenth-century show fish was a regular part of the household consumption of the Lord Justiciar at that time.¹¹³⁸ In 1393, the Earl of Ormond, James Butler, was spending Christmas with his household at New Ross, and a vast amount of food was ordered to keep the household fed, including 2,000 gallons of ale, 40 bullocks and 100 pairs of rabbits. The supplies also included five meases of herring, 100 cod and ling, 100 salted salmon and 100 whiting.¹¹³⁹

Before the build-up of English forces in Ireland later in the sixteenth century, fish was consumed by the soldiers of the Earl of Kildare. In 1534 the Earl agreed to supply his soldiers with a fixed ration that included both 'flesh days' when meat would be eaten, and 'fish days' when either

¹¹³⁵ Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 17; Flavin, "Consumption and Material Culture in Sixteenth-Century Ireland".

¹¹³⁶ The Exchequer: Pipe Office: Declared Accounts held at the National Archives at Kew hold additional records related to army purveyance in Ireland, but these records were not utilized in the current study. See records E351/148 to E351/170.

¹¹³⁷ Crooks, *CIRCLE - A Calendar of Irish Chancery Letters c. 1244-1509*, Henry III, no. 17, QFD ID 476; no. 18, QFD ID 1560; no. 20, QFD ID 474.

¹¹³⁸ Ibid., Edward III, no. 76, QFD ID 507.

¹¹³⁹ Ibid., Richard II, 71, QFD ID 527.

fish or butter was had.¹¹⁴⁰ The practice of instituting meat and fish days was common among armed forces and the general population in the sixteenth century.¹¹⁴¹ The soldiers would also get staples of bread and ale every day of the week; only their protein source would be alternated daily.¹¹⁴² Other records pertaining to the consumption of fish by armies before the 1560s are rare. This lack of records is not necessarily related to the frequency with which fish was eaten, but because fewer records were kept relating to supply earlier in the century. As the English army itself became more professionalised, and as its presence in Ireland increased later in the century, we find a growing number of records relating to its supply. However, there are some scattered mentions of fish as victuals from earlier decades. For example, in 1548, there was an inquiry made about the supply of fish to English forts in Ireland.¹¹⁴³ Then in 1551, there was a brief mention of fish in the supplies of an English expedition to Baltimore.¹¹⁴⁴

It was during the conflict in Ulster in the 1560s that the number of records relating to supplies increased dramatically. A document from November 1566 sets out that garrisons in Ulster were to have 'biscuit, meal and drink every day', then 'bacon, butter cheese or fish' three days in the week.¹¹⁴⁵ However, in practice, these set fish days did not always work out as planned. In November 1566, an English captain, Geoffrey Vaughan, was camped in Derry and critically low on supplies. Vaughan was expecting a delivery of live cattle from the O'Donnells in Donegal but had to also send a ship off to Scotland to collect fish.¹¹⁴⁶ The fact Vaughan could not get fish locally suggests that there was a lack of supply or a lack of enthusiasm on behalf of the Irish to part with theirs.

The primary concern with any foodstuff used in the army or navy rations was preservation; the food had to last. The technologies available to preserve food in the sixteenth century were limited. Food could be dried out, alcoholic, salted or brought alive, like the cattle Vaughan expected from Donegal. The staples of the army diet - biscuit, beer, cheese, and salted meat

¹¹⁴⁰ The agreement was necessary to prevent the forced purveyance of goods, which as mentioned earlier, was a practice hated by the population.

¹¹⁴¹ Patrick W. Hayes et al., "European Naval Diets in the Sixteenth Century: A Quantitative Method for Comparative and Nutritional Analysis", *Historical Methods: A Journal of Quantitative and Interdisciplinary History* 52, no. 4 (2019).

¹¹⁴² Brewer and Bullen, *Cal. Car. MSS, Vol. 1, 1515-1574*, no. 24, p. 28, QFD ID 766.

¹¹⁴³ Lennon, *C.S.P. Ire., Tudor Period 1547-1553*, no. 151, p. 41, QFD ID 594.

¹¹⁴⁴ *Ibid.*, no. 286, p. 119, QFD ID 600.

¹¹⁴⁵ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 307, p. 138, QFD ID 617. The biscuit described here is not a biscuit as we would imagine it. Biscuit in army rations were baked with nothing but flour, water and sometimes a pinch of salt. After cooking the biscuit would harden and become extremely durable and long lasting. It was a common feature in many European naval and army diets in the sixteenth century, see Lawrence V. Mott, "Feeding Neptune: Food and Nutrition in the Catalan-Aragonese Fleet, 1282–1302", *International Journal of Maritime History* 30, no. 1 (2018), p. 2; Jeff Pavlik, "Reproducing the Eighteenth-Century English Biscuit", *Journal of the Early Americas* 1, no. 11 (2011).

¹¹⁴⁶ Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 339, p. 152, QFD ID 619.

and fish – were all preservable but required expertise or external resources like salt to make them last. To be preserved, fish had to be dried out or heavily salted, sometimes both. As we know, Ireland had no domestic supply of salt in the sixteenth century, so this may have limited the possibilities for the English to acquire supplies of preserved fish in certain parts of the island. We also have to acknowledge that soldiers could forage, scavenge and steal food from the general population to supplement their diet.¹¹⁴⁷ So, we cannot be totally sure what they ate on a daily basis. However, the ration records are still useful for what they tell us about what preservable foods were available and how this shifted over time.

Preserved food was much less important for the diets of civilians, and while records relating to such diets are rare, some do exist. For example, in the summer of 1552, a group of English adventurers set up a mine near Waterford; their food supplies included 'corn, herring and hake'.¹¹⁴⁸ Due to their geographic proximity to Waterford, we can assume this fish could be carried to them fresh. However, that is not to say the army were the only consumers of preserved fish; any fish exported or brought inland for ordinary consumption had to be preserved. The difference was that unless an army was stationed near fisheries, their only option while on a campaign was preserved fish.

More detailed records related to civilians' diets can be found in the accounts of Peter Lewys, the proctor of Christchurch in Dublin, from 1564/5. These records describe the food bought to feed a group of masons working on the Cathedral over that period.¹¹⁴⁹ The staples of the masons' diets were not dissimilar to those of soldiers; they consumed bread and ale daily and regularly had fresh and salted beef.¹¹⁵⁰ Also included a variety of fresh food, including milk, vegetables, and eggs.¹¹⁵¹ Additionally, they ate a variety of fish, most commonly herring and cod. Both fresh and salted herring were purchased from merchants near Dublin and carted back to the city.¹¹⁵² For example, on 5 April 1565, the clerk purchased one barrel of herring from George Forland in Dalkey and had it carried to Dublin by horse.¹¹⁵³ On other occasions,

¹¹⁴⁷ Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 180.

¹¹⁴⁸ Lennon, *C.S.P. Ire., Tudor Period 1547-1553*, no. 346, p. 159, QFD ID 603.

¹¹⁴⁹ Raymond Gillespie, ed. *The Proctor's Accounts of Peter Lewis 1564-1565* (Dublin: Four Courts Press, 1996); Cullen, "Comparative Aspects of Irish Diet, 1550-1850", p. 50.

¹¹⁵⁰ One of the big differences between Irish and English diet at the beginning of the sixteenth century was that Irish people generally consumed unhopped ale, while the English drank hopped beer. Although this would change over the century as hopped beer grew in popularity in Ireland, Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, pp. 18; Cullen, "Comparative Aspects of Irish Diet, 1550-1850", p. 50.

¹¹⁵¹ Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 19.

¹¹⁵² Gillespie, *The Proctor's Accounts of Peter Lewis 1564-1565*, p. 25, 61, 64.

¹¹⁵³ *Ibid.*, p. 64.

the clerk purchased thornback rays (*Raja clavata*) and cod at Clontarf.¹¹⁵⁴ The mention of ray is interesting, as few other mentions of the fish were found in this study, suggesting it was not a large fishery and mostly consumed locally.¹¹⁵⁵ A variety of 'fresh fish' was also purchased at different points to feed the masons.¹¹⁵⁶

The masons most commonly ate fish on Fridays, Saturdays, and Wednesdays. In this respect, they were similar to the army rations and most of the general population, who maintained the Catholic tradition of observing fast days on which meat could not be consumed. Similar fasting practices were also followed on holy days and during Lent.¹¹⁵⁷ The proctor's accounts show that during Lent, the weekly expenditure on fish more than doubled, and the masons had more fish during this period than any other time in the year.¹¹⁵⁸ A similar pattern can be observed in sixteenth-century institutional accounts from England, fish was consumed year-round, but for certain institutions, it replaced meat entirely during Lent.¹¹⁵⁹

In a letter written in 1580, Thomas Might, the 'purveyor to Her Majesty's garrisons' in Dublin, wrote to Thomas Cecil promising he would source what herring he could for the army from the 'Lent store' in Dublin.¹¹⁶⁰ This account is intriguing, as it shows the city prepared for Lent by stockpiling fish. Another account of army rations from 1578 mentions that soldiers would receive eight herrings a day for four days in the week during the 'Lent season'.¹¹⁶¹ At other times fish consumption peaked for non-religious reasons. For example, in 1533, an English priest in Dublin reported that the town's citizens were eating fish five days a week outside of Lent, a trend 'he attributed to a scarcity of meat and not to an excess of piety or a fondness for fish'.¹¹⁶² However, this seems to have been an exceptional year, and in normal circumstances, fish was consumed year-round on specific days while the rate of consumption increased markedly during Lent. All these accounts also illustrate the large capacity of Dublin's fisheries

¹¹⁵⁴ "Raja clavata (Linnaeus, 1758) Thornback ray", <https://www.fishbase.se/summary/2059>; Gillespie, *The Proctor's Accounts of Peter Lewis 1564-1565*, pp. 51-52.

¹¹⁵⁵ Sir Thomas Phillip's account of ray fishing from 1611 was highlighted earlier in Chapter 3, Brewer and Bullen, *Cal. Car. MSS, Vol 5, 1603-1625*, no. 95, p. 150, QFD ID 910.

¹¹⁵⁶ This fish was not named by species, Gillespie, *The Proctor's Accounts of Peter Lewis 1564-1565*, p. 54.

¹¹⁵⁷ Eleanor Barnett, "Reforming Food and Eating in Protestant England, c. 1560-c. 1640.", *The Historical Journal* 63, no. 3 (2020), p. 513.

¹¹⁵⁸ Gillespie, *The Proctor's Accounts of Peter Lewis 1564-1565*, p. 15.

¹¹⁵⁹ Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 90.

¹¹⁶⁰ Might's title is mentioned in an earlier letter found in, Cunningham, *C.S.P. Ire., Tudor Period 1566-1567*, no. 368, pp. 161-162, QFD ID 622; the lent store is discussed in, Thomas Might to Burghley, 28 Sept 1580, SP 63/76 f.146, QFD ID 980; while a similar statement was made by Might in October, Thomas Might to Burghley, 18 Oct 1580, SP 63/77 f.104, QFD ID 983.

¹¹⁶¹ Brewer and Bullen, *Cal. Car. MSS, Vol. 2, 1575-1588*, no. 80, p. 122, QFD ID 805.

¹¹⁶² Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 24.

to supply the local population and show that Dublin's fisheries were more focused on local demand than export.

Eating fish on fast days was a Jewish tradition that Christians continued; however, several contested justifications emerged for why Catholics continued to observe the fast during the reformation.¹¹⁶³ Protestant reformers in England and across Europe wanted to abolish it because they believed it had no relation to salvation or receiving grace. Other reformers argued that Catholics viewed fish as inherently holier than other foods and objected to this belief, citing scripture to show both St Paul and Jesus taught that no foods were taboo. Writers like Luther and Calvin went further by arguing the fast was a 'reprehensible remnant of Judaism' from which Jesus has liberated his followers.¹¹⁶⁴ Modern historians have observed that since early Christianity, meat was viewed as a 'hot' food 'that inflamed the cardinal sin of lust and led to the loss of sexual innocence within the Galenic principles of bodily 'humours', and this is how the fast was justified.¹¹⁶⁵ Beliefs in the Galenic principles remained strong in the sixteenth century, with fish being viewed as a cold and moist food in contrast to hot meat.¹¹⁶⁶

Due to these objections, Lutheran and Reformed Protestant churches abandoned compulsory fast days across most continental Europe; however, this was not the case in Protestant England, and by extension, Ireland.¹¹⁶⁷ Under the reign of the protestant Edward VI, many Catholic traditions were discarded, but in 1548 the Parliament passed an Act that maintained fasting.¹¹⁶⁸ The Act upheld the belief that meat-eating led to vice, saying 'that due and godly abstinence is a means to virtue and to subdue men's bodies to their soul and spirit.' However, it also offered practical reasons for fish days, saying they would keep fishers employed and increase the supplies of meat and other foods in the kingdom.¹¹⁶⁹

The fish days were reinforced by legislation passed in Queen Elizabeth's reign, but they were reframed as an utterly secular observance of the law.¹¹⁷⁰ In 1563 the Parliament passed a bill spearheaded by William Cecil, who argued that the fish days, including a new one on

¹¹⁶³ Christopher Kissane, Beat Kümin, and Brian Cowan, *Food, Religion and Communities in Early Modern Europe* (London: Bloomsbury, 2018), p. 54.

¹¹⁶⁴ Barnett, "Reforming Food and Eating in Protestant England, c. 1560-c. 1640.", p. 513.

¹¹⁶⁵ Ibid., pp. 514-515. See a fuller discussion of the arguments around the fast see, Barnett and Stephen Hampton, "'Welcome Dear Feast of Lent': River Understandings of the Forty-Day Fast in Early Stuart England", *The Journal of Theological Studies* 63 (2012).

¹¹⁶⁶ Craig Muldrew, *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550-1780*, *Cambridge Studies in Economic History - Second Series* (Cambridge: Cambridge University Press, 2011), p. 33.

¹¹⁶⁷ Hampton, "'Welcome Dear Feast of Lent': River Understandings of the Forty-Day Fast in Early Stuart England", p. 646.

¹¹⁶⁸ Ibid., p. 624.

¹¹⁶⁹ Edward VI 2 & 3, c. 19, quoted in full in Ibid., pp. 624-625.

¹¹⁷⁰ Barnett, "Reforming Food and Eating in Protestant England, c. 1560-c. 1640.", p. 516; Ibid., p. 626.

Wednesdays, were necessary to sustain the English fishing industry, produce skilled mariners and consequently help restore and maintain a strong English navy.¹¹⁷¹ These secular fish days and 'political Lent' were maintained in England until the Long Parliament of 1642.¹¹⁷²

The law of fast days would have applied to the English parts of Ireland but could not have been enforced across the whole island during the sixteenth century. In this respect, there was a divergence in how different communities in Ireland justified fast days over the century. We know that the English army in Ireland retained fish days in their official ration lists for the whole century, but this was clearly motivated by political and practical concerns. We also know that Dublin observed the fast for political reasons in the later century, a trend likely followed by other Old English towns and Protestant New English settlers. However, Gaelic Irish poetry suggests that the native Irish retained their religious beliefs surrounded the fast, even while the practice was being reframed as secular in the London parliament.

For example, a poem written by an unknown Irish author in 1630 illustrates that herring was an important part of Lent in parts of Gaelic Ireland.¹¹⁷³ The poem is dedicated to the herring and their arrival on the Irish shores around Lent. The text contains a wealth of details about how the author and their community viewed the fish. Printed in full on the following page is the original Gaelic version of the poem, accompanied by an English translation by Sylvester ó Muirí and Katherine Simms.

The poem extols the herring's virtue, stating it 'protects us at the beginning of Lent'. This passage could have a double meaning; on the one side, the herring aided in the religious fasting, but it also provided a much-needed supply of food at the end of winter. The herring's arrival and its consumption during Lent are also explicitly linked to religion, with the Crucifixion and Easter referenced by the author. The poem further emphasizes the importance of the herring for the clergy, possibly because the author was a member of the priesthood himself, and also more generally because the fish would have fed the priests during Lent and on other religious holidays.

¹¹⁷¹ L. Sgroi, "Piscatorial Politics Revisited The Language of Economic Debate and the Evolution of Fishing Policy in Elizabethan England", pp. 5-6.

¹¹⁷² Barnett, "Reforming Food and Eating in Protestant England, c. 1560-c. 1640.", p. 515.

¹¹⁷³ See the following page for the full poem and reference.

*Mo-chean do theacht, a sgadáin!*¹¹⁷⁴

Mo-chean do theacht, a sgadáin!
druid liom, a dhaltáin uasail;
do chéad beatha 's do shláinte!
do thuillis fáilte uamsa.

Dar anam h'athar, a sgadáin,
gidh maith bradáin na Bóinne,
is duit labhras an duain-se,
ó's tú is uaisle 's is óige.

A fhir is comhghlan colann,
nách déanann comann bréige,
cara mar thú ní bhfuaras;
ná bíom suarach fá chéile.

Dá bhféachdaois uaisle Banbha
cia is mó tarbha don triúr-sa,
iasg is uaisle ná an sgadán,
idir bradáin is liúsa.

Is é ar bhféachain gach cósta
go crích bhóchna na Gréige,
iasg is uaisle ná an sgadán
ní bhfuair Conán Chinn-tSléibhe.

A sgadáin shéimh shúgaigh.
a chinn chúmhaigh an Chárgais,
a mhic ghrádaigh mo charad,
leam is fada go dtángais!

Gidh mór do thuit a-nuraidh
dod ghaol bunaidh fán méis-se,
ná cuimhnigh fíoch ná fala,
ó's tú cara na cléire.

A sgadáin shailtigh shuibhir
nach bíonn go duibhir dúinte,
leamsa do theacht ní hanait,
súil ar charaid an tsúil-se.

I dtús an Chárgais chéasta,
a fhir le ndéantar comhól,
ortsa, go teacht na Cásga,
is mór mo ghrása 's is romhór.

My affection for your coming, o herring
Sit near me you noble student
For your good health and life
You have earned a welcome from me.

On your father's life, o herring
Although salmon of Boyne are good
For you I compose this verse
Because you are the youngest and most noble.

O man of the completely clean body
Who does not form false friendships
I never had a friend like you
Let us not take each other for granted.

If the nobles of Ireland set out to discover
Which of these three is most useful
A fish more noble than the herring
Let it be a salmon or a pike

It is after searching each coast
As far away as the seas of Greece
A fish more noble than the herring
Was not found by Conán Cinn tSléibhe.

O herring that is meek and happy
That protects us at the beginning of Lent
O my loving companion and friend
For too long I await your coming!

Although there was a fall last year
In the count of your cousins on this platter
Do not be angry or hateful
Because you are a friend of the clergy.

O herring which is salty and generous
That does not be sad or sorrowful
I never doubt your coming
These eyes wait for a friend.

At the beginning of Lent of the Crucifixion
O man that one takes a drink with
For you, till the coming of Easter
Great is my love and very great

¹¹⁷⁴ *Mo-chean do theacht, a sgadáin*, poem 1, in Thomas F O'Rahilly, *Measgra Dánta: Miscellaneous Irish Poems, Part I* (Cork: Cork University Press, 1970). My thanks to Dr Katherine Simms for providing a copy of this poem and aiding with the transaction, and my sincerest thanks to Professor Sylvester Ó Muirí for doing the main part of the English translation.

The text also reaffirms much of what has been discussed about herring and their life cycle throughout this thesis. We know the herring arrived on certain parts of the Irish coast during their spawning season, in the case of this poem that was just before Lent. However, we also know that the spawning and recruitment patterns of the herring can change over time. The author speaks of waiting for the fish to arrive and feeling relief upon their arrival. They also state that there was a 'fall last year, In the count of your cousins on this platter'. This line suggests a drop in the abundance of spawning herring around 1630, an observation supported by the trade data discussed earlier in Chapter 4. As Figure 4.25 illustrates, herring exports were in decline in 1626 and were being eclipsed by the growth of pilchard exports.¹¹⁷⁵

The author also tells us that they ate salted herring, which means they had access to the fisheries and markets that produced this product. Interestingly, they also present the herring as a noble fish, despite it being a mass-produced and relatively cheap food, compared to some other fish, such as salmon. As the author writes, 'salmon of Boyne are good', but 'For you [the herring] I compose this verse'. The author also writes that 'For your good health and life' the herring have earned a welcome, suggesting a link between fish-eating and good health.¹¹⁷⁶

In another poem from the early seventeenth century by Eochaidh Ó hEoghusa (d. 1613) the narrator sarcastically instructs a butler on how to restore his digestive health. He told the man to return to the diet of his youth, which included eating whiting and undercooked meat.¹¹⁷⁷ This poem is not serious in tone, but it does suggest that whiting too was part of the Gaelic diet in this period, and like the previous work, there is a connection between eating fish and good health. While the previous two poems come from the seventeenth century, we can assume that similar attitudes toward herring and whiting existed in Gaelic Ireland in the sixteenth century too.

However, there is also some indication that the Irish did not always strictly follow the fast. In a satirical poem from circa 1600, Aonghus Ruadh Ó Dálaigh attacked the noble and ecclesiastical establishment of Gaelic Ireland. He complained that as he travelled around the country, his Gaelic hosts were 'so stingy or poverty-stricken' that they could not feed him, or their own families, properly. He particularly objected to being given meat in the house of the coarb of

¹¹⁷⁵ Woodward, "Irish Trade and Customs Statistics, 1614-1641". For more on why this occurred see later in this chapter, and A. J. Southward, G. T. Boalch, and Linda Maddock, "Fluctuations in the Herring and Pilchard Fisheries of Devon and Cornwall Linked to Change in Climate Since the 16th century", *Journal of the Marine Biological Association of the United Kingdom* 68, no. 3 (1988).

¹¹⁷⁶ *Mo-chean do theacht, a sgadáin!*

¹¹⁷⁷ *A dhuine na heaslainte*, discussed in Simms, "References to Landscape and Economy in Irish Bardic Poetry", p. 158. The word used in the original poem is 'faoitel', which Dr Simms believes refers to whiting. The poem has also been published in an untranslated form in, *A Bardic Miscellany* ed. Damian McManus and Eoghan O Raghallaigh, no. 10, pp. 6-7.

Fenagh, a complaint Katherine Simms suggests may relate to being served meat during Lent by an ecclesiastical figure.¹¹⁷⁸ It is not clear to what extent this one incident proves the Irish habitually broke the Lenten fast. Simms also mentions a text from the twelfth century that complained the Irish 'eat meat throughout Lent', but even if this were true, we cannot assume the same held true four centuries later.¹¹⁷⁹ It may be that the hardship and decline of fisheries toward the end of the sixteenth century simply meant fish was too expensive for many people in Gaelic Ireland to purchase at the time the poem was composed.

Outside these mentions of sea fish, Gaelic poetry also contains many mythical and metaphorical mentions of salmon. For example, Cormac mac Airt choking on a salmon bone, and in *Mairg do ghrios Giolla Padraig* the poet Aithirne insults the River Mourne so that it rose up against him, and when the waters subsided, many salmon were left stranded.¹¹⁸⁰ There is even some evidence that Gaelic lords enjoyed fishing for salmon themselves. A letter from the State Papers from 1596 mentioned earlier in Chapter 5 has Nicholas Weston reporting to Dublin Castle that 'Tyrone [Hugh O'Neill] and his young lady lie at Castle Roe', 'they are fishing salmon in the Bann'.¹¹⁸¹ This entry makes it explicit that O'Neill controlled the fishing on the Bann at that time and would have reaped the economic rewards, but it also suggests that O'Neill and his wife enjoyed fishing themselves. Katherine Simms writes that 'the Irish nobility seem to have spent most of their time out of doors', enjoying activities such as hunting.¹¹⁸² Simms does not mention fishing, but it is possible this love of the outdoors among the Irish nobility extended to sport fishing.¹¹⁸³ If this were the case, we would have to assume that the stigma attached to those who fished for a living was not extended to individuals who fished for sport.

It is also clear that certain fish held particular value for Gaelic Irish lords. As mentioned in Chapter 3, we know from the O'Driscoll Inquisition of 1609 that the Lords of Baltimore prized halibut. They required any fisher who caught one to hand it in to the castle. This rule illustrates they wanted it for their own table, likely because it was rare and a symbol of their power over

¹¹⁷⁸ Simms, "References to Landscape and Economy in Irish Bardic Poetry", pp. 157-158.

¹¹⁷⁹ Ibid., pp. 157-158.; quote from John Anthony Watt, *The Church in Medieval Ireland* (Dublin: University College Dublin Press, 1998), p. 38.

¹¹⁸⁰ My thanks to Dr Simms for providing these references through personal correspondence, for more see, Katharine Simms, "The O Harlons, the O Neills and the Anglo-Normans in Thirteenth-Century Armagh", *Seanchas Ardmhacha: Journal of the Armagh Diocesan Historical Society* 9, no. 1 (1978), p. 79.

¹¹⁸¹ This letter was mentioned earlier in Chapter 4, Section 4.3.5, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 27, p. 519, QFD ID 1185.

¹¹⁸² Simms, "References to Landscape and Economy in Irish Bardic Poetry", pp. 148-149.

¹¹⁸³ Arthur Went believed this was a reference to salmon angling, see Went, "The Pursuit of Salmon in Ireland", p. 199.

the fisheries.¹¹⁸⁴ Additionally, a core part of Gaelic lordship was the right to levy *cuid oidhche*, which was the privilege of hospitality and food tributes from subjects.¹¹⁸⁵ The claiming of valuable fish could be viewed as part of this tradition, but one that was adapted by Gaelic families with a maritime focus. So, while we cannot say much for certain about the fish-eating habits of the Gaelic Irish, the surviving material suggests that fish was part of the Irish diet and certain fish held important religious, cultural, and political significance.

One downside of the sources discussed so far is that they do not allow us to know the amount of fish and other foods that were consumed daily. However, if we return to army diets, some ration records do contain this level of detail. For example, in 1573, the Earl of Essex was preparing to establish his plantation in Ulster, and the records of this expedition list the rations soldiers would receive. On every day of the week, they would receive a bottle of beer and either a 24-ounce (oz) loaf of bread or 2 pounds (lbs) of biscuit. On fish days, the soldiers would be given 0.5 lbs of butter and 1 lb of cheese, or '8 white herrings'.¹¹⁸⁶ This diet is remarkably similar to that provided to English sailors at this time, which is not surprising because this diet was built around what was locally available and what would survive for a reasonable period without rotting.¹¹⁸⁷

Clarkson and Crawford have written that the diets of soldiers in Ireland during the 1570s did not contain sufficient calories to sustain them.¹¹⁸⁸ Their figures are based on the rations provided by the Earl of Essex but are critically flawed because they fail to include calories from the beer ration. If the beer is included, then a total calorie figure of 4,214 kcal is reached for the same diet on a fish day. The methods used to reach this figure and the potential pitfall of those methods are discussed in the paper *European naval diets in the sixteenth century* by the current author.¹¹⁸⁹ Based on the daily calories recommended for an adult male as calculated by the European Food Safety Authority, the figure of 4,214 kcal would have been more than sufficient to maintain the soldiers.¹¹⁹⁰ However, the diet is deficient in certain minerals and vitamins, including vitamin C, a flaw shared by many army and naval diets from this period.

¹¹⁸⁴ O'Driscoll Inquisition, 1609, in O'Donovan, *The Genealogy of Corca Laidhe*, pp. 100-107.

¹¹⁸⁵ Luke McInerney, "A Sixteenth Century Bardic Poem composed for Seán Mac Conmara, Lord of West 'Clann Chuiléin', *Seanchas Ardmhacha: Journal of the Armagh Diocesan Historical Society* 23, no. 1 (2010), p. 46; Simms, "Guesting and Feasting in Gaelic Ireland", p. 68.

¹¹⁸⁶ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 798, p. 485, QFD ID 680.

¹¹⁸⁷ N. A. M. Rodger, *The Safeguard of the Sea: A Naval History of Great Britain, Volume One 660-1649* (London: Harper Collins, 1997), p. 235.

¹¹⁸⁸ Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 180.

¹¹⁸⁹ Hayes et al., "European Naval Diets in the Sixteenth Century: A Quantitative Method for Comparative and Nutritional Analysis".

¹¹⁹⁰ "Overview on Dietary Reference Values for the EU Population as Derived by the EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA)" (European Food Safety Authority, 2017).

Additionally, as mentioned, if the soldiers' food intake did meet their basic caloric needs, they in all probability took every opportunity to supplement their diet with what they could harvest, scavenge or steal. Scavenging would have also been necessary for them to avoid the scurvy that they would eventually develop from the lack of vitamin C in their official rations.¹¹⁹¹ No reports of scurvy among English soldiers in Ireland were found for this study, but it is abundantly clear that supplying these basic rations at all was often a great challenge for the English army. As the previous chapter illustrated, periods of conflict in Ireland went alongside food shortages and hunger. One of the chief difficulties the English faced in expanding their power in Ireland was keeping their soldiers and garrisons supplied.¹¹⁹² These problems with supply also tell us something more generally about the state of fisheries as time progressed.

In the later decades of the sixteenth century, the English expanded military operations into more remote places of Ireland. This expansion created more complex supply lines and required the transportation of large quantities of food from the Pale into distant parts of the island. For example, in 1574, the English garrison at Athenry in County Galway had to be supplied with large quantities of food sent from Dublin. These included supplies to brew ale, 250 beeves and 30 barrels of herring.¹¹⁹³ In the same year, a group of merchants sent 364 barrels of herring from Dublin to the Earl of Essex in Ulster.¹¹⁹⁴ Herring from the fishery at Carlingford was also sent to forces throughout Ulster in 1574.¹¹⁹⁵ These examples illustrate the capability of the herring fisheries around Dublin and Carlingford in supplying the army at this time. That capacity is further demonstrated in a memorandum from 1575 that stated 'corn and fish will be had in Ireland, butter and cheese must come out of England and Wales'.¹¹⁹⁶ So evidently, there was a shortage of some supplies, but fish remained available. However, the army buying up fish in this manner would have reduced the availability of fish for the local population. As demonstrated in Chapter 4, the prices paid by the army were far below market value, and this would have damaged the business of both fishers and merchants.¹¹⁹⁷

In the late 1570s, the focus of conflict in Ireland shifted from Ulster to Munster, and fish remained part of the army rations in the Munster campaign, too. However, a report by William Pelham in 1579 recounts that fish had to be shipped from England to Waterford and Cork in

¹¹⁹¹ Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*, p. 181.

¹¹⁹² Hayes-McCoy, "The Completion of the Tudor Conquest and the Advance of the Counter-Reformation, 1571-1603", p. 94

¹¹⁹³ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 1093, p. 675, QFD ID 735.

¹¹⁹⁴ *Ibid.*, no. 888.1, p. 545, QFD ID 723.

¹¹⁹⁵ *Ibid.*, no. 884.1, p. 542, QFD ID 704.

¹¹⁹⁶ *Ibid.*, no. 1253, p. 768, QFD ID 741.

¹¹⁹⁷ See Chapter 4, Section 4.6. The example discussed earlier showed herring prices were 33 per cent lower for the army compared to the market rate.

that year. The fact the army imported fish from England suggests a shortage in Ireland, but other issues might have influenced the decision. Pelham writes that the merchants supplying the army in Waterford and Cork were 'skilful enough', not in supplying food, but in 'making their own profit'.¹¹⁹⁸ In this case, local corruption might have influenced the decision to import fish for the army.

Additionally, in the early 1580s, one of the most dramatic shifts in the consumption of fish in Ireland took place. In January 1580, seven lasts of stockfish were imported to supply a portion of the army for a whole month.¹¹⁹⁹ This stockfish was imported from England, but it was not produced there; it likely originated from Iceland, Norway or the Shetland Islands, as these locations were the major producers of stockfish at this time.¹²⁰⁰ Later in September 1580, the first recorded shipment of Newfoundland fish arrived in Ireland to supply the army.¹²⁰¹ Fishing had been taking place in Newfoundland since soon after its discovery in 1497, but this shipment in 1580 was the first purposeful import of Newfoundland fish to Ireland found in this study. A few French ships returning from Newfoundland had been captured by pirates and taken to Ireland in past years, but these had not been purposeful imports.¹²⁰² Stockfish and Newfoundland fish are both cod products; as discussed earlier, stockfish was air-dried cod, while the majority of the cod from Newfoundland was heavily salted and dried. Recent DNA analysis of cod provisioned on the *Mary Rose*, an English warship that sank in 1540, revealed that most fish onboard originated from the northern North Sea and a small amount from Newfoundland.¹²⁰³

Mentioned earlier was a letter from Thomas Might sent to Thomas Cecil in September 1580, in which he discusses Dublin's 'Lent store' of herring. As well as promising to source herring locally, Might also asked Cecil to send 'butter and very good stockfish and Newfoundland fish' from Liverpool to Dublin to 'serve the fish days' of the army.¹²⁰⁴ The importation of stockfish

¹¹⁹⁸ Brewer and Bullen, *Cal. Car. MSS, Vol. 2, 1575-1588*, no. 231, p. 191, QFD ID 809.

¹¹⁹⁹ Proportion of victual for 2,000, 19 Jan 1580, SP 63/71 f.46, QFD ID 967.

¹²⁰⁰ Orri Vesteinsson, "Commercial Fishing and the Political Economy of Medieval Iceland", in *Cod & Hering*, ed. J. H. Barrett and D. C. Orton (Oxford: Oxbow, 2016); Childs, "England's Icelandic Trade in the Fifteenth Century: The Role of the Port of Hull"; Jónsson, "Fisheries off Iceland, 1600-1900"; Nedkvitne, "The Development of the Norwegian Long-distance Stockfish Trade"; Helge Sorheim, "The Birth of Commercial Fisheries and the Trade of Stockfish in the Borgundfjord, Norway", *ibid.*; Hance D. Smith, *Shetland Life and Trade 1550-1914* (Glasgow: Bell and Bain, 1984).

¹²⁰¹ Thomas Might to Burghley, 28 Sept 1580, SP 63/76 f.146, QFD ID 980.

¹²⁰² Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 109, p. 21, QFD ID 340; no. 240, pp. 46-47, QFD ID 381.

¹²⁰³ Hutchinson et al., "The Globalization of Naval Provisioning: Ancient DNA and Stable Isotope Analyses of stored cod from the wreck of the *Mary Rose*, AD 1545".

¹²⁰⁴ Thomas Might to Burghley, 28 Sept 1580, SP 63/76 f.146, QFD ID 980. The term 'Newfoundland fish' is always synonymous with cod from Newfoundland.

and Newfoundland cod in the 1580s seems to be connected to a lack of locally available fish in this period. However, a letter by Edward Baeshe, also sent in September 1580 contradicts this with claims that stockfish was needless because there were 'plenty of herrings and other fish' in Munster.¹²⁰⁵ Despite Baeshe's letter, on the whole, the qualitative evidence and quantitative trade data suggest there was a lack of local fish supplies in Ireland at this time, and these shortages motivated the importation of alternative fish products for the army. Later in November 1580 a large purchase of 20,000 Newfoundland cod at 20s. per one hundred fish was made at Chester to supply the army in Ireland. The unknown author of this order reports that the purchase was motivated by the high price of victuals in Ireland. The letter also that Might's efforts to source herring in Dublin made back in September had not been successful as none were available in the town.¹²⁰⁶

When the Newfoundland cod eventually reached Ireland, the 'Commissioners for the victuals at Dublin' wrote back to Chester at the end of November 1580 to say they were returning the fish because it was rotten.¹²⁰⁷ When Newfoundland cod was dried and salted correctly, it could last for years.¹²⁰⁸ However, the fish was liable to rot if not stored in a dry location or if the preservation techniques were done incorrectly. Much later, in 1750, the Victualling Board of the English Royal Navy conducted a study on the reliability of different supplies; they found that dried fish was the least reliable foodstuff they regularly purchased, rotting on average 7.9 per cent of the time, compared to less than 1 per cent for most other foods.¹²⁰⁹ The preservation techniques used for dried fish in the eighteenth century remained unchanged from earlier times, so these figures are a useful indication of how reliable supplies of fish in the sixteenth century were as well.

In 1581, army suppliers were attempting to purchase herring for the soldiers in Munster, efforts that later fell through due to a lack of money.¹²¹⁰ Around the same time, army officials reported that 'the soldiers in Munster are dying of famine'.¹²¹¹ Another letter from January 1582 again

¹²⁰⁵ Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 16, p. 205, QFD ID 977; Edward Baeshe to Burghley, 6 Sept 1580, SP 63/76 f.17.

¹²⁰⁶ Chester. W. Glaseour to Burghley, 13 Nov 1580, SP 63 78 f.81, QFD ID 989.

¹²⁰⁷ Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 69, p. 272, QFD ID 993.

¹²⁰⁸ Pope, *Fish Into Wine*, p. 11. The seller in Chester later asked permission to sell the returned fish on to another buyer, see Chester. W. Glaseour to Burghley, 19 Jan 1581, SP 63/80 f.42.

¹²⁰⁹ N. A. M. Rodger, *The Wooden World : An Anatomy of the Georgian Navy* (Annapolis, Md.: Naval Institute Press, 1986), pp. 84-85.

¹²¹⁰ Wallop and Waterhouse to Burghley, 14 Mar 1581, SP 63/81 f.65, QFD ID 996; Hamilton, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 20, p. 332, QFD ID 1006.

¹²¹¹ C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 20, p. 332, QFD ID 1006.

reports a complete lack of victuals in Munster.¹²¹² Supplies in Dublin were healthier, and multiple shipments of herring were sent from Dublin to towns in Munster as the year progressed.¹²¹³ Likewise, supplies of fish were brought into Munster from Wales.¹²¹⁴ Shipments continued into the next year, but the English problems with supply continued as multiple ships were destroyed by 'tempests or by pirates' on the journey to Munster.¹²¹⁵

A detailed report dating from January 1583 showed large quantities of herring being shipped from Dublin to Munster, with 20 tonnes going to Limerick, 13 tonnes to Cork and 32 tonnes to Waterford.¹²¹⁶ Further shipments were later carried over by other ships as well.¹²¹⁷ Towns like Waterford and Cork usually hosted productive fisheries of their own, so these shipments suggest a severe lack of supply in those towns at this time. Another report from February 1583 does show some fish being purchased locally in Wexford and Waterford, but only small amounts compared to what was still being shipped from Dublin.¹²¹⁸ As discussed in the previous chapter, a general famine prevailed across Munster at this time, which provides further evidence the fisheries were not operating normally.¹²¹⁹

A drop in the number of army supply records followed the conclusion of the Desmond Rebellion in 1583. However, a report from 1585 outlines changes to the rations that would be supplied to soldiers in subsequent conflicts. The rations remain almost identical to those given to troops in 1573, except for the new inclusion of Newfoundland fish. On fish days in 1583, the soldiers could be fed with eight herring as before, or half a 'Newland fish' if such was available.¹²²⁰

As discussed, in the late 1580s, the export of herring from Ireland was restricted by the English to increase food security and provide more supplies to the army.¹²²¹ Then in 1590, there are a series of letters from Irish merchants petitioning to be allowed to export upwards of 10,000

¹²¹² Wallop and Waterhouse to Burghley, 13 Jan 1582, SP 63/88 f.36, QFD ID 1009.

¹²¹³ A rate for herrings, 1582, SP 63/98 f.205, QFD ID 1022.

¹²¹⁴ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 20, p. 349, QFD ID 1011.

¹²¹⁵ In relation to shipwrecks see, *ibid.*, no. 22, p. 353, QFD ID 1584; Wallop to Burghley, 27 July 1583, SP 63/103 f.122; Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 49, p. 448, QFD ID 1030. On shipments of fish to Munster see, *ibid.*, no. 76, p. 480, QFD ID 1040.

¹²¹⁶ Note of beef and herrings sent from Dublin, 13 Jan 1583 SP 63/99 f.42, QFD ID 1023.

¹²¹⁷ Wallop to Burghley, 13 Jan 1583, SP 63/99 f.40, QFD ID 1024.

¹²¹⁸ Note of the charges of beef and herrings sent and to be sent into Munster, 1583, SP 63/99 f.112, QFD ID 1028.

¹²¹⁹ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 2: 1574-1585*, no. 49, p. 448, QFD ID 1030.

¹²²⁰ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 586, p. 595, QFD ID 1466.

¹²²¹ See Chapter 5 for further discussion.

barrels of herring that would 'not fit to be eaten' by Lent.¹²²² This suggests again that Lent was the prime season for herring consumption, and also that fisheries were productive in the early 1590s. However, the peace of the early 1590s would not last, as the Nine Years War began in 1593 and continued until 1603. In November 1595, the Lord Deputy, William Russell, wrote to London to say that the harvest had failed that year due to extremely wet weather. He also reported he was running out of money to purchase the 'staples' of 'herrings and beef'.¹²²³ Despite the lack of money, an order of herring from Waterford and Wexford was placed in late November 1595, suggesting the fisheries were operating to some extent. At the same time, beef had to be sent from England as there was none available locally.¹²²⁴

There was another poor harvest in 1596 owing to continuing abnormal weather conditions and, in this instance, the hunger extended to Dublin as well.¹²²⁵ In November that year, Sir Henry Wallop requested '600 or 700' barrels of herring be sent from Munster to Dublin to help save the troops there from hunger.¹²²⁶ In another letter in late November, the Archbishop of Dublin communicated that herring was 'now in season' and requested funds to buy the fish to help feed the population.¹²²⁷ However, these herring did not materialise. In January 1597, Sir Henry reported that they had expected a 'good likelihood of fishing at Waterford' to help feed the country, but the fishery had since failed.¹²²⁸ Then, as mentioned in the previous chapter, by the end of the year, the authorities reported that the herring fishery had collapsed throughout all of Ireland and Scotland, severely limiting supplies.¹²²⁹ Section 6.3.3 of this chapter will discuss the abnormal weather conditions in the 1590s in greater detail.

In response to shortages and the failure of traditional fisheries, some enterprising merchants sought out new sources of food. In January 1596, Nicholas Weston made a voyage in his own ship to Danzig and brought back rye, giving 'great relief both to the country here and to the army'.¹²³⁰ Weston was a Dublin alderman and one of the city's most prominent merchants in

¹²²² Lord Deputy to Burghley, 26 Jan 1589-90, SP 63/150 f.40, QFD ID 1118.

¹²²³ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 10, p. 429, QFD ID 1175.

¹²²⁴ Wallop to Burghley, 30 Nov 1595, SP 63/184 f.131, QFD ID 1176.

¹²²⁵ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 6: July 1596-Dec 1597*, no. 50, p. 62, QFD ID 1187; no. 31, p. 116, QFD ID 1191.

¹²²⁶ Sir Henry Wallop to Burghley, 18 Oct 1596, SP 63/194 f.142, QFD ID 1198.

¹²²⁷ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 6: July 1596-Dec 1597*, no. 27, p. 171, QFD ID 1202.

¹²²⁸ Sir Henry Wallop to Burghley, 18 Jan 1596-7, SP 63 197 f.87, QFD ID 1204.

¹²²⁹ The Lords Justices Loftus and Gardener and Council of Ireland to the Privy Council, 29 Nov 1597, SP 63/201 f.175, QFD ID 1230.

¹²³⁰ Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 5: Oct 1592-June 1596*, no. 13, p. 450, QFD ID 1180. Weston was discussed in the previous chapter as the victim of several piracy incidents.

the late sixteenth century. For this reason, he has been written about by several other historians.¹²³¹ Following the successful importation of Danzig rye, Weston sent two more of his ships to Newfoundland to get fish.¹²³² As mentioned above, Newfoundland cod had been imported to Ireland earlier in the century, and some Irish ships had carried it to England as early as 1566.¹²³³ However, Weston is the first Irish merchant directly involved in the Newfoundland fishery for which detailed records have survived.¹²³⁴

As well as sending ships himself, Weston also purchased Newfoundland fish from English merchants. In November 1596, he sent four ships to Poole to bring back dried Newfoundland fish to supply Dublin.¹²³⁵ Weston's efforts to keep the populace fed likely helped his election to mayor in 1597.¹²³⁶ The following year he put forward a new plan to supply the whole of Dublin and its garrison 'with good Newfoundland fish' for the duration of Lent. He also proposed to supply the garrisons in Ulster with the same.¹²³⁷ Weston's plan signals a significant shift in the consumption of fish in Ireland at that time. This is the first record of a population being sustained with a brand-new product from North America, and it shows Ireland was not an exception to the broader trends in the consumption of fish that were taking place across Europe.¹²³⁸

A deposition taken by the Admiralty Court in 1602 provides a wealth of details on how Weston's voyages to Newfoundland operated and how he was able to bring this new product to the Irish market. The deponent in this case was Nicholas Parris, a crewmember of the *Lion*, one of three ships owned by Weston that sailed from Poole to Newfoundland in April 1601. The ship was 60 tons and described as a 'bad sailor' with poorly fitted sails.¹²³⁹ Parris came from Poole, but other crew members of the *Lion* came from Weymouth, Cornwall, London, Ireland, France and the Netherlands.¹²⁴⁰ Parris recounts that Weston had an agreement with the Queen's purveyors

¹²³¹ Canning, "Profits and Patriotism- Nicholas Weston, Old English Merchants, and Ireland's Nine Years' War, 1594-1603"; Appleby, "The Fishing Ventures of Nicholas Weston of Dublin"; Terry Clavin, "Nicholas Weston", *Dictionary of Irish Biography* (2009); Colm Lennon, *The Lords of Dublin in the Age of Reformation* (Dublin: Irish Academic Press, 1989).

¹²³² Hamilton, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 5: Oct 1592-June 1596, no. 13, p. 450, QFD ID 1180.

¹²³³ For the shipments to England see, Chapter 4, Section 0, Wilson, *Chester Customs Accounts, 1301-1566*, pp. 88-89.

¹²³⁴ Appleby, "The Fishing Ventures of Nicholas Weston of Dublin", p. 151.

¹²³⁵ The Lord General Sir John Norreys and Sir Geoffrey Fenton to Burghley, 1 Nov 1596, SP 63/195 f.1, QFD ID 1200.

¹²³⁶ Canning, "Profits and Patriotism- Nicholas Weston, Old English Merchants, and Ireland's Nine Years' War, 1594-1603", p. 88.

¹²³⁷ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 7: Jan 1598-Mar 1599 no. 123, p. 297, QFD ID 1247.

¹²³⁸ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

¹²³⁹ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 455 & 456, p. 100.

¹²⁴⁰ *Ibid.*, no. 450, 454, 455, 456, 457, pp. 98-101.

in Ireland to send three ships to Newfoundland that year and bring back fish 'for the provision of the army'.¹²⁴¹ Weston did not make the voyage himself but appointed a master to command each ship. In this sense, it is debatable if this was an 'Irish' voyage to Newfoundland. In some respects, it was, due to the fact the Irishman Weston financed it and used his own ships, but on the other hand, the English and European crew provided the necessary skills and expertise for the voyage.

Once at Newfoundland, the crew of the *Lion* caught 'eighty and odd thousand' codfish, along with five hogsheads of train oil, which was oil pressed from fish.¹²⁴² Unfortunately for Weston and the crew, on the return voyage, the ship was captured near Kinsale by the Spanish fleet that landed troops there in October 1601. This timeline tells us that they had spent roughly six months engaged in travelling and fishing in Newfoundland. The *Lion* was towed toward Lisbon by their Spanish captors but broke free in a storm. The ship then sailed toward the Berlengas Islands near Lisbon but was captured by yet another pirate, this time an Englishman, Henry Nott. Ignoring that the *Lion* was a friendly ship, Nott took it back to England and sold the cargo of fish for profit. Finally, Parris reported that, due to the misfortune, Weston could not fulfil his contracts to supply the army in Ireland.

In total, the voyage of the cargo carried by the *Lion* was worth between £515-520, based on the fish prices provided by the crew.¹²⁴³ According to another crewmember, Michael Browne, the crew were going to be paid £7, 'a hogshead of train oil, a cloth cloak and two shares' for taking part in the voyage.¹²⁴⁴ Parris estimated that Weston sustained damages in excess of £150, not including the lost value of the ship (between £250-300) and the value of the fish.¹²⁴⁵ If everything is factored in, then Weston lost almost £1,000. Parris also recounts that, after dropping the fish off in Ireland, the *Lion* was due to pick up salt in La Rochelle and engage in another voyage to Newfoundland that year. This loss of future potential revenue only compounded Weston's misfortunes.

It seems likely that this was not the first voyage of the *Lion* to Newfoundland, and Weston had at least two other ships making similar voyages. However, as discussed in the previous chapter, Weston was the victim of another piracy incident in 1597. In a letter from 1600, the then Mayor of Dublin, Gerald Young, reported that Weston imported more rye and Newfoundland fish in

¹²⁴¹ Ibid., no. 450, p. 98, QFD ID 1572.

¹²⁴² Most of the fish they caught was dried, with only 4,000 carried back 'wet'.

¹²⁴³ Appleby, *A Calendar of Material Relating to Ireland from The High Court of the Admiralty Examinations 1536-1641*, no. 450, p. 99 & no. 457, p. 101.

¹²⁴⁴ Ibid., no. 451, p. 99.

¹²⁴⁵ Unfortunately, we do not know the size of the crew so we cannot work out the profit Weston expected to make.

that year, but had also lost more ships.¹²⁴⁶ The combined impact of these losses seem to have forced Weston out of the Newfoundland trade, and by 1603 he was only importing Newfoundland cod from Chester.¹²⁴⁷ However, there may have been other reasons for Weston's departure from the trade.

Records from the State Papers make it clear that Newfoundland cod and other fish remained vital supplies for the English army during the closing years of the Nine Years War. An updated ration list from 1599 had one fish day per week on which each soldier would get eight herring or one and a half Newfoundland fish. Alternatively, four soldiers could share either one 'Holland ling' or one large Newfoundland fish.¹²⁴⁸ While eight herring remained a consistent ration across the century, the amount of Newfoundland cod provided to each soldier seems to have changed: from half a fish, to one and a half, to four men sharing one large fish. These adjustments suggest that there was more significant variation in the size of cod from Newfoundland compared to herring, meaning it was harder to establish a consistent ration. This account also suggests that fish from the Netherlands was imported to Ireland at this time, although there are far fewer records detailing this trade. Another ration list from November 1600 prescribed fish two days a week. Likewise, 'dry fish', likely from Newfoundland, was eaten two days a week by the garrison of Dundalk in October 1600.¹²⁴⁹

Large shipments of herring and Newfoundland fish continued to be imported into Ireland to meet the demands of these rations. Herring mainly came from Scotland to supply troops in Ulster.¹²⁵⁰ In 1601, a shipment of 5,000 Newfoundland fish was sent from England to Donegal to keep the army there supplied.¹²⁵¹ The English army came to rely on fish in this period as an essential item to keep their troops fed.¹²⁵² However, just because the soldiers were kept alive with fish does not mean they enjoyed eating it. Another ration list from 1600 dictated that the men should get one ling or one 'Poor John' on one day in the week.¹²⁵³ Poor John was English vernacular for dried Newfoundland cod, and the name suggests the prevalent attitude toward

¹²⁴⁶ Gerald Young, Mayor of Dublin, to Sir Robert Cecil, 10 Sept 1600, SP 63/207/5 f.35, QFD ID 1307.

¹²⁴⁷ Appleby, "The Fishing Ventures of Nicholas Weston of Dublin", p. 153.

¹²⁴⁸ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 8: Apr 1599-Feb 1600, no. 26, p. 12, QFD ID 1253.

¹²⁴⁹ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 9: Mar-Oct 1600, no. 109, p. 490, QFD ID 1321.

¹²⁵⁰ *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 7: Jan 1598-Mar 1599, no. 22, p. 31, QFD ID 1235; *ibid.*, no. 75, p. 80, QFD ID 1239; Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 9, p. 10, QFD ID 1332.

¹²⁵¹ Sir Henry Docwra to the English Privy Council, 10 Aug 1601, SP 63/209/1 f.50, QFD ID 1388.

¹²⁵² Appleby, "The Fishing Ventures of Nicholas Weston of Dublin", p. 152.

¹²⁵³ Brewer and Bullen, *Cal. Car. MSS, Vol. 4, 1601-1603*, no. 23, p. 500, QFD ID 866; John Traves, Commissary for Ulster, to Lord Buckhurst, 30 June 1600, SP 63/207/3 f.332, QFD ID 1295.

the fish.¹²⁵⁴ Newfoundland cod seems to have been despised by many of the soldiers who were provided with it.

In 1599, the Earl of Essex requested supplies for his soldiers, but specified they should contain 'little or no fish, for it neither keepeth well, nor pleaseth the soldier, who by such victual hath so much to provoke his thirst, and no provision to quench it'.¹²⁵⁵ As discussed earlier, Newfoundland fish was heavily salted for preservation purposes, which would invoke thirst, and it did spoil more often than other supplies.¹²⁵⁶ The method used to cook the Newfoundland fish is expanded on in a letter written by Thomas Sackville, Lord Buckhurst, in January 1600. Sackville writes that every Captain should be provided with a kettle in which to seethe the fish.¹²⁵⁷ Seethe means to boil; however, before the fish was boiled, it would have to be soaked in water for an extended period to soften it up.¹²⁵⁸ Sackville suggests seething the fish with 'herbs and some oatmeal to make porridge'. While this does not sound appetising to the modern palate, he suggests it will provide 'great sustenance and relief to the soldier'.¹²⁵⁹

A letter from November 1600 outlines the issues with cooking fish in this manner; the author writes that the common soldier 'cannot possibly carry fish with him', 'having neither time to water it, nor vessels to dress it in'.¹²⁶⁰ Lord Mountjoy reported in 1600 that his men were selling away their ration of fish for a fraction of the original cost, due to a lack of equipment and fuel necessary to cook it.¹²⁶¹ The English commander in Carrickfergus made similar complaints in July 1601; he requested they were 'no more victualled with fish' because his men had no means to cook it in the field.¹²⁶² Sir George Carew wrote in 1601 that biscuit and cheese were far easier

¹²⁵⁴ David B. Quinn, *Explorers and Colonies: America, 1500-1625* (London: Hambledon Press, 1990), p. 309.

¹²⁵⁵ Atkinson, C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 8: Apr 1599-Feb 1600, no. 54, p. 31, QFD ID 1257.

¹²⁵⁶ Rodger, *The Wooden World : An Anatomy of the Georgian Navy*, pp. 84-85.

¹²⁵⁷ Atkinson, C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 8: Apr 1599-Feb 1600, no. 7, p. 380, QFD ID 1271.

¹²⁵⁸ Inderhaug, "Stockfish Production, Cultural and Culinary Values", p. 20.

¹²⁵⁹ Atkinson, C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 8: Apr 1599-Feb 1600, no. 7, p. 380, QFD ID 1271.

¹²⁶⁰ C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 43, p. 42, QFD ID 1338.

¹²⁶¹ C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 9: Mar-Oct 1600, no. 109, p. 491, QFD ID 1322.

¹²⁶² C.S.P. Ire., *of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 59, p. 419, QFD ID 1384.

to carry because it did not require the 'carriage of pots and pans' and for this reason, fish was 'very unpleasing to the soldier'.¹²⁶³ Other accounts from these years describe similar issues.¹²⁶⁴

The dislike extended beyond the practical cooking of the fish. In July 1601, Mountjoy and others reported back to the privy council, saying their only remaining supplies were dried fish. He reported that the soldiers were 'exceeding weary' of the fish and refused to eat it more than once a week. In the summer heat, he claimed that the fish 'distempereth' the soldiers and sickened them due to its poor condition and high level of salt.¹²⁶⁵ Eating heavily salted foods in warm weather would lead to greater thirst among the soldiers, but it is also important to consider the Galenic principles mentioned earlier.¹²⁶⁶ As discussed, in this view of food and health, fish was considered a cold and moist food, but it could be 'tempered' with salt, which was considered a hot food. The Galenic principles were focused on balancing the body's humours, with different professions and types of people requiring different balances. While hot food was at times seen to lead to sin, it was also believed to be good for labourers and soldiers, as the salt dried out and balanced the fish's moist properties.¹²⁶⁷ So, in this case, the practical reasons for disliking the fish were likely also linked to the Galenic principles through which sixteenth-century people viewed their food.

A memorandum from August 1601 shows the scale of fish imports that were needed to feed the troops in Ireland. This one document alone lists 5,000 troops at three different locations who needed to be provided with fish two days a week for months at a time.¹²⁶⁸ Other accounts paint a similar picture. In May 1601, 90,000 fish were sent to Lough Foyle to keep the troops supplied, and a ship had to stay in the local bay to store the fish. However, after a time, the captain there reported his troops 'utterly refuse to eat of it at all'.¹²⁶⁹ Another report from December 1601 recounted that soldiers in Ireland had lived on nothing but 'biscuit and Poor John' for several months.¹²⁷⁰ In January 1603, Sir George Carew reported that, unless other

¹²⁶³ Brewer and Bullen, *Cal. Car. MSS*, Vol. 4, 1601-1603, no. 55, p. 52, QFD ID 831.

¹²⁶⁴ See for example, Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 68, p. 334, QFD ID 1377; *ibid.*, no. 71, pp. 209-210, QFD ID 1360; Brewer and Bullen, *Cal. Car. MSS*, Vol. 4, 1601-1603, no. 262, p. 265, QFD ID 849.

¹²⁶⁵ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 83, p. 439, QFD ID 1385.

¹²⁶⁶ Craig Muldrew, *Food, Energy and the Creation of Industriousness: Work and Material Culture in Agrarian England, 1550-1780*, Cambridge Studies in Economic History - Second Series (Cambridge: Cambridge University Press, 2011), p. 33.

¹²⁶⁷ *Ibid.*, p. 38.

¹²⁶⁸ Memorandum on the Provision of Victuals for Ireland, 22 Aug 1601, SP 63/209/1 f.108, QFD ID 1390.

¹²⁶⁹ Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 10: Nov 1600-31 July 1601, no. 71, p. 338, QFD ID 1378.

¹²⁷⁰ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 11: 1601-3 (with addenda 1565-1654), no. 265, p. 254, QFD ID 1421.

provisions were sent, his soldiers had to 'live this Lent upon poor John' alone.¹²⁷¹ The oversupply of Newfoundland fish must have also contributed to its dislike among the soldiers. When they had variety, and the fish was decent quality, the soldiers could sometimes prefer it. In August 1600, the Treasurer in Dublin asked for the troops in Leinster and Connaught to be supplied with nothing but fish, although he specified it should be 'excellent good' quality. He writes, 'that being good fish, the soldier will like it better than always butter and cheese'.¹²⁷² This indicates that, for the soldiers, variety and quality were the most important characteristics in their rations. However, there was little of either element in the food they were provided at many points during the war.

Corruption in the supply system could partially explain why fish was provided so often. In a report to the Privy Council in March 1602 the Lord Chancellor and others detailed transgressions among the suppliers of army rations in Ireland.¹²⁷³ The report claims that the victuallers provided more fish than their contracts specified. They were, in the words of the report, trying to 'make delivery in fish only' because it was 'a provision most profitable unto them'. This account suggests that the Newfoundland fish had high-profit margins at the time. However, the issue with this, as illustrated above, was that the fish was despised by the soldiers. This dislike was compounded because much of the fish provided was low quality or rotting. Merchants in Ireland blamed this on the English suppliers who they said sent bad provisions. Meanwhile, the English suppliers claimed the Irish agents were hoarding good supplies until prices increased, sometimes allowing food to rot in pursuit of more profit.¹²⁷⁴ These instances of corruption may help explain why Newfoundland fish was so common as an English supply during the Nine Years War. While it is difficult to unravel the truth, it seems likely there were high margins to be made on the sale of Newfoundland fish to the army, even if it was inferior in quality.

Still, there were other reasons for the prevalence of fish. Newfoundland cod was cheap and in ready supply; several nations, including the English, had large fleets engaged in its harvesting. We know Nicholas Weston and possibly other Irish merchants were involved in the fishing and transportation of the fish to Ireland. The failure of Irish domestic fisheries also motivated the importation of supplies from other regions, and the Newfoundland fishery was the most productive fishery at this time. However, it is not clear the extent to which the general population

¹²⁷¹ Ibid., no. 549, p. 563, QFD ID 1463.

¹²⁷² Atkinson, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 9: Mar-Oct 1600, no. 63, p. 342, QFD ID 1297.

¹²⁷³ Mahaffy, *C.S.P. Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]*. Vol. 11: 1601-3 (with addenda 1565-1654), no. 210, pp. 304-315, QFD ID 1431.

¹²⁷⁴ Ibid., no. 210, pp. 304-315, QFD ID 1431.

consumed Newfoundland fish in the sixteenth century. Nicholas Weston planned to feed the population of Dublin with Newfoundland cod in 1598 and people there probably could have purchased the fish in the market. However, this study found no other records detailing the everyday consumption of Newfoundland cod by the general population. Outside the Pale, its consumption was unlikely, especially among the Gaelic Irish who would have had limited access to markets in Dublin during the war.

Ultimately, Newfoundland fish did not progress to become a common dietary item, and today there are no Irish recipes for salted cod, and it is not commonly found on Irish menus, the same is true in England.¹²⁷⁵ Meanwhile, in other European nations, such as Spain and Portugal, salted cod became a delicacy and is still commonly eaten today.¹²⁷⁶ As we have seen, English soldiers took a severe dislike to the Newfoundland cod during the war. These attitudes possibly had a lasting impact on its popularity in Ireland and England. However, the rations carried by the Spanish soldiers who landed at Kinsale in 1601 also included Newfoundland cod or 'bacalao' as the Spanish called it, making this argument less persuasive.¹²⁷⁷ Other research has suggested that it was simply more profitable for English fishers to bring their cod to Spain rather than import it back to England or Ireland.¹²⁷⁸ Therefore, economics may be the main factor for Newfoundland cod's lack of popularity in Ireland.

6.2.3 Conclusion

The army supply records discussed in this section illustrated that fish was a critical part of the rations given soldiers at many points throughout the sixteenth century in Ireland. The Earls of Kildare supplied their private armies with fish early in the century, and fish remained a staple of troops who arrived from England in the 1590s. For much of the century, the army provided its soldiers with local Irish fish, the most common fish being herring, with eight herrings being a standard portion in rations throughout the period. When fisheries were not doing well and could not meet local demand in Ireland, fish was imported in large amounts to meet the army's needs. In the earlier decades of the century, much of this imported fish came from fisheries in

¹²⁷⁵ This has not been studied in detail, but Newfoundland fish does not receive a single mention in Clarkson and Crawford, *Feast & Famine - History of Food & Nutrition in Ireland, 1500-1920*.

¹²⁷⁶ Inderhaug, "Stockfish Production, Cultural and Culinary Values", p. 11; Grafe, *Distant Tyranny: Markets, Power, and Backwardness in Spain, 1650-1800*, p. 52.

¹²⁷⁷ Mahaffy, C.S.P. *Ire., of the reigns of Henry VIII., Edward VI., Mary, and Elizabeth, 1509-[1603]. Vol. 11: 1601-3 (with addenda 1565-1654)*, no. 638, p. 644, QFD ID 1467; no. 209, p. 205, QFD ID 1414.

¹²⁷⁸ Grafe, *Distant Tyranny: Markets, Power, and Backwardness in Spain, 1650-1800*; "The Globalisation of Codfish and Wool: Spanish-English- North American Triangular Trade in the Early Modern Period", *Working Paper No. 71/03* (2003); Pope, *Fish Into Wine*.

Scotland and England. However, in the latter part of the century this changed, and far more fish was imported from Newfoundland, with stockfish from northern Europe and ling from the Netherlands also arriving in Ireland.

The State Papers also attest to the English army's mammoth problems in supplying their soldiers during the Nine Years War. For a combination of reasons, fisheries in Ireland failed during the 1590s, and, in response, enterprising merchants such as Nicholas Weston exploited the booming cod fisheries in Newfoundland to keep the English army, and at times the general population, supplied with cheap protein. However, cod from Newfoundland was not popular among soldiers in the sixteenth century. This dislike was borne from a lack of practicality when it came to cooking cod in combat situations. Furthermore, partly due to corruption and partly because the fish was cheap and readily available, soldiers were oversupplied with cod and given little choice but to consume low-quality fish regularly. However, that overconsumption was in part borne from necessity; the records suggest that at many points during the Nine Years War, cod kept the English army supplied when all other foodstuffs were lacking. The soldiers may have despised it, but fish kept the army alive; it is no exaggeration to suggest it saved the English war effort or at least brought about an English victory sooner than would have happened otherwise.

The evidence highlighted here has shown that fish was a more crucial dietary element in sixteenth-century Ireland than many historians have appreciated to date. Evidence from Dublin illustrated that eating fish on certain days and during Lent remained common during the sixteenth century. Dublin even kept a store of herring especially for the Lenten season. However, there was also a divergence in the justification for eating fish during the sixteenth century. In England, the Protestant reformation motivated a shift away from religious fasting and the initiation of a new 'political Lent'.

In contrast, the evidence from Gaelic poetry suggests that many Irish continued to eat fish during Lent in line with Catholic tradition. These poems also demonstrate that fish was an important aspect of the Irish diet and held special significance for both religious and health reasons. The poem *Mo-chean do theacht, a sgadáin*, suggests that the herring's yearly life cycle formed an important part of Gaelic Irish culture and diet, as the arrival of the herring marked Lent and facilitated observance to the fast.¹²⁷⁹ Furthermore, a scattering of other evidence hints that particular fish, such as halibut and salmon, were prized by Gaelic lords and formed a part of coastal Irish communities' cultural identity. Overall, Catholic traditions

¹²⁷⁹ *Mo-chean do theacht, a sgadáin*, poem 1, in Thomas F O'Rahilly, *Measgra Dánta: Miscellaneous Irish Poems, Part I* (Cork: Cork University Press, 1970).

surrounding fish intertwined with older mythology to create a unique perception and attitude toward fish in sixteenth-century Ireland.

The army records examined here also tell us Ireland did not escape the broader changes in the consumption of fish that happened across Europe due to the exploitation of the fisheries in Newfoundland. Nevertheless, more remains to be done to understand why fish from this region did not become popular in later centuries, despite it being a cheap and readily available foodstuff. Overall, we have much more to learn about consumption and diet in general. Louis Cullen wrote in 1992 that the study of Irish diet was 'in its infancy'; significant work has been conducted since then to further our knowledge in the area, but much more remains to be done.¹²⁸⁰

Still, it is an exciting time in the study of Irish diet and consumption. The combination of nutritional and historical information allows us better to understand the impact of past diets on human health.¹²⁸¹ New scientific and archaeological methods also hold vast promise to tell us more about what people ate and how they lived.¹²⁸² There is also a growing interest among historians and the public regarding the history of diet and consumption in Ireland.¹²⁸³ Finally, in the current world where we are putting increasing pressure on the oceans and land to feed a growing global population, it is more important than ever to understand consumption patterns, habits and philosophies around food in the past.¹²⁸⁴

6.3 Environmental Influences on Fisheries

6.3.1 Introduction

The following sections will consider three central topics concerning fisheries and their relationship with the natural environment in the sixteenth century. Fisheries are intrinsically linked to the environment and climate they inhabit; the human enterprise of fishing also alters

¹²⁸⁰ Cullen, "Comparative Aspects of Irish Diet, 1550-1850", p. 52.

¹²⁸¹ Hayes et al., "European Naval Diets in the Sixteenth Century: A Quantitative Method for Comparative and Nutritional Analysis".

¹²⁸² "FoodCult: Food, Culture and Identity in Ireland c. 1550-1650", <https://foodcult.eu/>.

¹²⁸³ For example, see the FoodCult project mentioned above and another project at TCD: "Food Smart Dublin." (Trinity Centre for Environmental Humanities, 2020) <https://www.tcd.ie/tceh/projects/foodsmartdublin/>.

¹²⁸⁴ For an example of the current push to generate more food from the ocean in a sustainable manner see, "High Level Group of Scientific Advisors, Food from the Oceans: How can more food and biomass be obtained from the oceans in a way that does not deprive future generations of their benefits?" (Brussels: European Commission, 2017). This report took advice for historians as well as marine scientists showing that the perspective of the humanities is important in this field.

the natural environment in many ways. The first section will consider the human impact on aquatic ecosystems in the sixteenth century. It will explore how people then perceived their influence on these environments and if they felt the need to protect them from pollution or overexploitation. Additionally, it will ask if fisheries in the sixteenth century were sustainable in the long term and if they might have suffered from overexploitation.

The second and final section considers how changes in the natural environment influenced fisheries in the fifteenth and sixteenth centuries. The latest research on the history of Ireland's past climate and its relationship to societal change will be explored. Furthermore, tentative links will be drawn between specific climate events and the trajectory of the fisheries in the fifteenth and sixteenth centuries. New research from the NorFish project will be examined for what it can tell us about the influence of volcanic eruptions on fisheries and how changes in plankton productivity have impacted fish catches in the past. Lastly, the claims of other historians regarding the role of fish migration will be explored and critiqued in the light of modern scientific literature.

6.3.2 Anthropogenic Impact on Aquatic Ecosystems

There are few examples of sixteenth-century fishers showing concern for the degradation of the marine species they harvested. However, there are indications that people were aware of their potential impact on riverine ecosystems. While river fisheries are not the focus of this work, the examples discussed below highlight that some fisheries in the sixteenth century were vulnerable to human impacts. Furthermore, as we explored earlier, certain river fisheries, such as those on the Bann, were regularly visited by foreign fisheries and were economically significant; therefore, it is essential to consider how anthropogenic factors influenced them.

In 1466, the Dublin Corporation ordered that 'that no tanner, glover nor any person use limed ware or leather work in the River Liffey on account of the destruction of the salmon'. Perpetrators had to pay a fine if they polluted the river.¹²⁸⁵ The tanning of leather is known to produce a range of pollutants that are potentially damaging to fish populations.¹²⁸⁶ Additionally, in the Parliament of 1538, a statute was passed that ordered the removal of all 'weirs, purprestures, millponds, engines, and other obstacles on the river Boyne and other streams in

¹²⁸⁵ Went, "Fisheries of the River Liffey. Notes on the Corporation Fishery up to the Dissolution of the Monasteries", p. 171.

¹²⁸⁶ Mwinyikione Mwinyihija, "Main Pollutants and Environmental Impacts of the Tanning Industry", in *Ecotoxicological Diagnosis in the Tanning Industry*, ed. Mwinyikione Mwinyihija (New York, NY: Springer New York, 2010).

Meath and Uriell'. In the lawmakers' words, the order was necessary because these structures were doing 'great hurt' to the 'salmon fry' in the rivers.¹²⁸⁷ It was also forbidden to erect a fishing weir on or near a neighbour's land in Brehon law.¹²⁸⁸ The concern over the erecting of weirs was also related to navigation, as any additional obstacles in the river would create barriers to boats and migrating fish.

Recent research has linked the decline of salmon in northern European rivers during the medieval and early modern periods to the rise of water-powered mills.¹²⁸⁹ The authors established quantitative figures to show the correlation between the growth of watermill and the decline of salmon in select rivers. We cannot achieve the same quantitative figures for Irish rivers, but the qualitative evidence does suggest that the impact of river infrastructure was a concern for people in the early modern period.

In 1569, Parliament passed a law preventing the grazing of 'swine, hogge or pigge' near rivers from the fifth of March to the end of September each year. The law noted the 'great hurt and hindrance' livestock did to 'the frye of salmon, eel and other commodious fishes' that inhabited rivers.¹²⁹⁰ Several more statutes were passed in 1569, including 'Act against the killing of young fry of eels and salmon', and 'An act against laying hemp, flax or limed hides in freshwater or rivers'.¹²⁹¹ Similar restrictions were implemented against the flax industry by Dublin Corporation in 1585. They banned the 'retting' or soaking of flax in ditches on the grounds of All Hallows priory 'for avoiding hurt to the increase of fish for that it flows often to the said ditches'.¹²⁹² The processing of flax has been shown to lead to river pollution as the runoff from the process can easily seep into river systems.¹²⁹³

While these examples would suggest people in the sixteenth century were concerned with conservation, we must remember that powerful and wealthy individuals generally controlled the fishing rights on rivers. It was in these individuals' interest to protect the fisheries, so they continued to make catches and generate profit. However, in many ways, the impact of the laws highlighted here would be the same as current conservation efforts. People at this time clearly

¹²⁸⁷ Brewer and Bullen, *Cal. Car. MSS - Misc Docs - Vol 6 - Book of Howth*, f. 79, p. 437.

¹²⁸⁸ Mac Laughlin, *Troubled Waters: A Social and Cultural History of Ireland's Sea Fisheries*, p. 90.

¹²⁸⁹ R. H. J. Lenders et al., "Historical Rise of Waterpower Initiated the Collapse of Salmon Stocks", *Scientific Reports* 6 (2016).

¹²⁹⁰ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 56.

¹²⁹¹ Cunningham, *C.S.P. Ire., Tudor Period 1568-1571*, no. 353, p. 140, QFD ID 667; no. 354, p. 141, QFD ID 668; no. 355, p. 141, QFD ID 669.

¹²⁹² Went, "Fisheries of the River Liffey: II. Notes on the Corporation Fishery from the Time of the Dissolution of the Monasteries", p. 42.

¹²⁹³ E. F. Howard, G. W. Gleeson, and F. Merryfield, "The Pollutational Character of Flax Retting Wastes", *Sewage Works Journal* 6, no. 3 (1934), p. 598.

understood the impact the industry, river infrastructure and agriculture had on rivers and appreciated how sensitive these freshwater ecosystems could be to change. The trade data discussed in Chapter 4 showed that salmon exports in the sixteenth century declined earlier than marine species like herring. It is possible that pollution and the degradation of river ecosystems damaged salmon stocks and contributed to this decline. For future historians, survey sources, such as the Civil Survey from the seventeenth century, hold potential for the study of river infrastructure and its link to ecosystem degradation.¹²⁹⁴

Arthur Went has also suggested that long-term overexploitation has damaged or destroyed many oyster colonies in Irish waters.¹²⁹⁵ It seems that even in 1600, Dublin Corporation was concerned about the sustainability of their oyster beds. In that year, the Corporation ordered that 'the dredgers for oysters in Poolbeg should bring up the gravel and stones which they find there and cast the same upon the banks for the better preserving of the Pool'.¹²⁹⁶ These regulations suggest the oyster habitat was being degraded over time by the harvesting practices. As we will see later in this section, land reclamation in recent centuries had entirely altered the area around Poolbeg in Dublin Bay.

Legislators did not show the same concern for preserving sea fisheries in the sixteenth century, and there are several reasons why this might have been the case. Observing changes in river systems was more straightforward, as they were smaller and more enclosed habitats. Furthermore, the same rights and ownership system was not applied to sea fisheries, so there were no landowners to lobby for protection. River systems were also likely more vulnerable to human influence than marine ecosystems. However, that is not to say that historically humans could not negatively impact marine ecosystems. There is also an ongoing debate between marine environmental historians as to the degree to which humans impacted fish stocks prior to the advent of industrialised fishing in the nineteenth century. Some historians, such as Jeffrey Bolster, have argued that fishers in the past, using primitive technologies, had a substantial impact on marine ecosystems and altered them significantly.¹²⁹⁷ In 2013, Bolster wrote that while the impact of human manipulation has become visible in recent years, 'the process itself - little understood and, until recently, generally ignored - has been underway for centuries'.¹²⁹⁸

¹²⁹⁴ For an example of how the Civil Survey can be used to generate detailed maps and quantitative figures see, Arnold Horner, "Through Fractured Lens of Civil Survey - Buildings across Mid-Seventeenth Century Dublin Region", in *At the Anvil: Essays in Honour of William J. Smyth*, ed. Patrick J. Duffy and Williams Nolan (Dublin: Geography Publications, 2012).

¹²⁹⁵ Went, "Oyster Fisheries", p. 56.

¹²⁹⁶ *Ibid.*, p. 57.

¹²⁹⁷ Jeffrey Bolster, W., *The Mortal Sea : Fishing the Atlantic in the Age of Sail* (Cambridge: Harvard University Press, 2012).

¹²⁹⁸ "Opportunities in Marine Environmental History", p. 55.

Consideration for the longer-term history of fish extractions has also filtered into marine science. As discussed in the introduction, in his 1995 article, Daniel Pauly called on fisheries' managers to take the long history of marine systems into account when determining quotas.¹²⁹⁹ Pauly's ideas are influential for historians as well because they mean the study of historical fisheries could, in some instances, help to inform the current quotas that are used to manage fisheries. Extending that 'baseline' back to the sixteenth century is almost impossible, but the theory does invite us to consider the idea that the ecosystems we view today are far from pristine and have undergone generations of human interference and exploitation.

Other studies have concluded that past fishers had no substantial impact on fish stocks. For example, in his study on the Dutch North Sea herring fishery, Bo Poulsen compared the modern total allowable catch (TAC) to historical extractions. Across Europe, TAC is agreed by member states through mechanisms set down in the Common Fisheries Policy. TAC amounts are intended to set fish extractions at limits that are deemed sustainable.¹³⁰⁰ Poulsen concluded that the historical herring fisheries could not have impacted stocks because they were far below the modern TAC.¹³⁰¹ However, other studies have definitively shown that humans significantly impacted marine mammals such as whales in the past.¹³⁰² Studies focused on Spain, Brazil, and the north-eastern USA have demonstrated that hunters in the past could decimate whale populations with rudimentary technology.¹³⁰³ That said, whales are fundamentally different from superabundant species such as herring; there are far fewer individuals in whale populations, and they are therefore more vulnerable overall to human exploitation.

The same questions posed in these studies are relevant in the Irish case; all the data collected for this study suggests that fisheries in Ireland declined toward the end of the sixteenth century. As we have seen, there were shortages of herring in Ireland during the 1590s, and exports to England and Wales completely collapsed. Given this, it is natural to ask if overfishing contributed to the decline. We can approach this question by using the same methods as Poulson, that is, comparing Ireland's modern TAC with historical catches. As herring was the

¹²⁹⁹ Pauly, "Anecdotes and the Shifting Baseline Syndrome of Fisheries".

¹³⁰⁰ "The Common Fisheries Policy (CFP)." (European Commission, 2020) https://ec.europa.eu/fisheries/cfp_en.

¹³⁰¹ Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860*, p. 80.

¹³⁰² Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)", p. 4.

¹³⁰³ There are many studies on this topic, for examples see, Randall R Reeves, Jeffrey Breiwick, and Edward D Mitchell, "History of Whaling and Estimated Kill of Right Whales, *Balaena glacialis*, in the Northeastern United States, 1620–1924", *Marine Fisheries Review* 61 (1999); Barkham, "French Basque 'New Found Land' Entrepreneurs and the Import of Codfish and Whale Oil to Northern Spain, c. 1580 to c. 1620"; Aguilar, "A Review of Old Basque Whaling and its Effect on the Right Whales (*Eubalaena glacialis*) of the North Atlantic"; Nina Vieira, Patrick Hayes, and Al Matthews, "Facing Changes, Changing Targets: Sperm-Whale Hunting in Late Eighteenth-Century Brazil", *Environment & Society Portal, Arcadia* 44 (2019).

most important and most consistent catch during the sixteenth century, it makes sense to focus on that species in the Irish case as well. In 2019, the TAC for herring in waters surrounding Ireland was 13,268 TLW.¹³⁰⁴ Not all these catches go to Irish fisheries but are instead shared among EU member states.

Our best estimate for how much herring was extracted in the sixteenth century derives from the trade data discussed in Chapter 4. That showed us that the highest level of exports happened in 1525/6 when 1,092 TLW was exported from Ireland. The highest figure from the seventeenth-century data was 3,679 in 1640/1.¹³⁰⁵ However, these are only export figures. Domestic consumption would have to be included in order to calculate the total level of extraction. Unfortunately, as discussed earlier, it is almost impossible to estimate domestic consumption from early modern Ireland. However, overall, the evidence suggests that it was unlikely that sixteenth-century fishers were capable of exceeding, or reaching, the current TAC of 13,268.

So, given the disparity between historical extractions and the current sustainable limits, it would seem unlikely that people in the early modern period were capable of overfishing. However, there are some complicating factors in this assumption. The Irish coastal region as defined by the EU and ICES is far more extensive than the region that would have been accessible to early modern fisheries. The stocks available to fishers in the past were far more restricted compared to today. Furthermore, the current TACs represent a system that has already undergone massive shifts since the sixteenth century, so it is difficult to speak with confidence as to their comparability.

Additionally, as has been discussed and demonstrated throughout this thesis, fishers targeted the herring during the spawning season when they came close to shore in large numbers. This fishing strategy meant that fishers heavily targeted specific herring populations that were accessible and suited their boats and fishing methods. Modern fisheries scientists have noted, since the herring aggregate in such large numbers during spawning periods, that high levels of mortality can be exerted on them 'with little fishing effort'.¹³⁰⁶ That is to say; it does not take many fishers or many fishing hours to catch or kill a large number of herring during the spawning period. Targeting herring during this time could also negatively impact recruitment and lead to weak class groups in subsequent years.¹³⁰⁷ Fishers in the sixteenth century targeted the same

¹³⁰⁴ "COUNCIL REGULATION (EU) 2019/124 of 30 January 2019 fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters" (The Council of the European Union, 2019).

¹³⁰⁵ Woodward, "Irish Trade and Customs Statistics, 1614-1641".

¹³⁰⁶ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds", p. 2.

¹³⁰⁷ Corten, "Herring and Climate: Changes in the Distribution of North Sea Herring Due to Climate Fluctuations", p. 17.

populations for years; it is, therefore, feasible that they could reduce the stock levels of specific spawning populations in the most popular fishing areas.¹³⁰⁸ Unfortunately, the evidence is not strong enough to prove this with certainty, but it is very possible that unsustainable fishing practices damaged the long term productivity of herring fisheries, even during the sixteenth century.

In the case of every other species of fish, the TAC allocated to Irish fishers alone exceeds the amount of fish we can confirm was extracted during the late fifteenth and sixteenth centuries. The Irish TAC for hake was 3,493 TLW in 2020, while the highest export of hake on record from our study period was 350 TLW in 1492.¹³⁰⁹ However, it is notable that the largest catches today are very different from those in the sixteenth century. Today the most popular species of fish caught by Irish fishers are mackerel, horse mackerel, and blue whiting (*Micromesistius poutassou*).¹³¹⁰ None of these featured prominently in early modern fisheries. This change in target species is down to several factors, including changing tastes and consumption patterns, the overexploitation of traditional catches like herring over the centuries, and also the development of new fishing technology that allows for the targeting of deeper water species much farther off the coast. The historical comparison illustrates that fisheries in the past were very different to those today, but nevertheless, many of the same issues we face now, including pollution, habitat degradation and overfishing were faced by early modern fishers, too. It is particularly interesting to note that the pollution and the degradation of river systems have a far longer history than we might expect, and these were critical issues even in the sixteenth century.

Fundamentally, comparing the modern TAC figures to historical catches has its difficulties. Doing so assumes that the ecosystem in the sixteenth century was the same as it was today.¹³¹¹ Many aspects of the modern ecosystem in which herring live have changed, not least the physical structure of many parts of the coastline. As well as being vulnerable to overexploitation, herring spawning habitats are incredibly fragile and easily damaged by natural or human disturbances.¹³¹² To understand historical fisheries, we must appreciate that the physical structure of the coast has changed over time. Coastlines have undergone both natural and anthropogenic changes since the sixteenth century, and in some cases, these changes

¹³⁰⁸ A similar observation is made by Alison Mary Locker, Mary Locker, "The Role of Stored Fish in England 900-1750AD; The Evidence from Historical and Archaeological Data", p. 34.

¹³⁰⁹ "2020 Quota Uptake - Landings." (Sea-Fisheries Protection Authority, 2020)
<https://www.sfpa.ie/Statistics/Quotas>.

¹³¹⁰ "Species Dashboard, Blue Whiting (*Micromesistius poutassou*).\" (Marine Institute of Ireland, 2020)
<https://shiny.marine.ie/speciesdash/>.

¹³¹¹ Poulsen, *Dutch Herring: An Environmental History, c. 1600-1860*, p. 80.

¹³¹² O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds", pp. 2-3.

have altered the habitats of marine species and rendered areas no longer suitable for certain species.

Coastal change occurs all the time through natural physical processes. Sediment transport by waves and currents, as well as coastal erosion, are both major drivers of this continuous change.¹³¹³ Additionally, high energy events like storms can have a significant effect on the coast over short periods. This impact is especially felt in areas like the Irish west coast, which is exposed to intense storms from the North Atlantic Ocean.¹³¹⁴ Coastal change is also human-made: over centuries, land has been reclaimed in many parts of the coast, artificial harbours and sea walls have been constructed, and channels have been dredged in bays.¹³¹⁵ As we have seen, most sixteenth-century fisheries took place within inshore waters and close to settlements, and it is these waters that have undergone the most noticeable change as towns and the industry grew and began to reclaim land from the sea. It must be said that invisible changes have taken place as well, with problems such as nutrient enrichment altering the chemistry of coastal waters and damaging fisheries.¹³¹⁶ For example, researchers from the Baltic have demonstrated that it is possible to establish the level of eutrophication, although not as far back as the sixteenth century.¹³¹⁷

We unfortunately do not possess the sources to understand how the most coastal areas have changed between the sixteenth century and the modern day. As a test, several maps from the sixteenth century were georeferenced using the methods illustrated in Chapter 1, Section 1.6 and compared to the modern coastline during this study. This research demonstrated that maps from that period are mostly impressionistic with regards to coastlines and contain few useful details. For this reason, they are not practical for tracing coastal change. However, for certain urban areas, such as Dublin Bay, we can use more recent historical maps to gain a better understanding of what the area, and its fisheries, would have looked like in the sixteenth century.

¹³¹³ J. R. French and H. Burningham, "Coastal Geomorphology: Trends and Challenges", *Progress in Physical Geography* 33 (2009), p. 117.

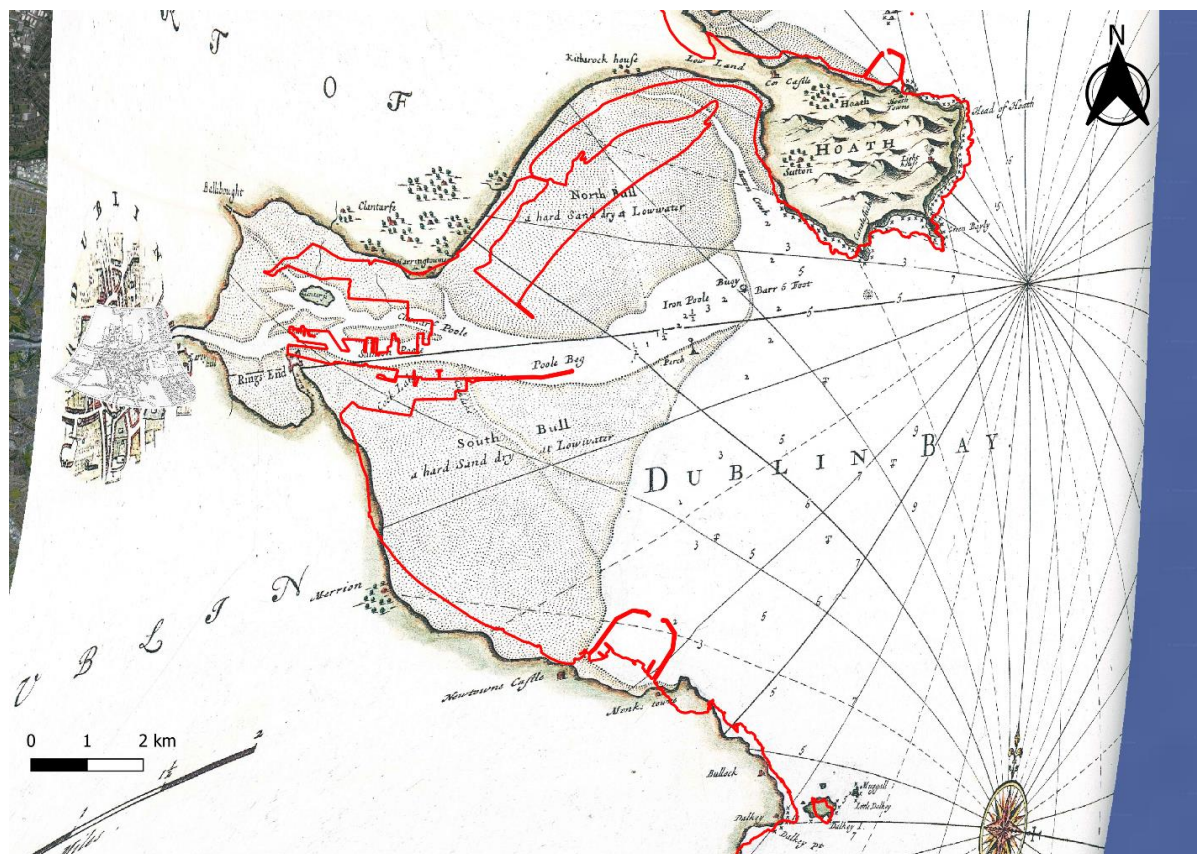
¹³¹⁴ J. A. G. Cooper et al., "Identifying Storm Impacts on an Embayed, High-Energy Coastline: Examples from Western Ireland", *Marine Geology* 210 (2004).

¹³¹⁵ O'Sullivan and Breen, *Maritime Ireland, An Archaeology of Coastal Communities*, p. 17.

¹³¹⁶ R. J. Gowen et al., "Production and Its Fate in Two Coastal Regions of the Irish Sea: The Influence of Anthropogenic Nutrients", *Marine Ecology Progress Series* 208 (2000).

¹³¹⁷ Jesper H. Andersen et al., "Long-term Temporal and Spatial Trends in Eutrophication Status of the Baltic Sea", *Biological Reviews* 92, no. 1 (2017).

For this case study we will use Captain Greenville Collins 1693 map of Dublin Bay (Map 6.1 below).¹³¹⁸ While this map was drawn almost two centuries after our study period ends, it can still tell us something about what Dublin Bay looked like in pre-modern times. Overlaid on Map 6.1 is also John Speed's 1610 map of Dublin (in white and black). This is the earliest map of Dublin City we have, and it illustrates the scale of the city at the time and demonstrates well how far the modern shoreline has moved.¹³¹⁹



Map 6.1 – Dublin and Dublin Bay by Captain Greenville Collins, 1693.¹³²⁰

Collins' map illustrates that before the construction of the north and south sea walls, the city could only be reached through a narrow channel. The construction of the north wall significantly altered the structure of the bay, as it caused Bull Island to form behind it.¹³²¹ Previously this area would have been a sizeable shallow sandbank. As shown earlier, fish was often purchased

¹³¹⁸ John Blake, *The Sea Chart, The Illustrated History of Nautical Maps and Navigational Charts, 2nd Edition* (London: Bloomsbury, 2016), p. 47.

¹³¹⁹ This map was shown earlier in Chapter 2, see Map 2.5.

¹³²⁰ Greenville, "Dublin and Dublin Bay, 1693", from John Blake, *Sea Charts of the British Isles* (London: Conway, 2005), p. 88; Speed, "Speed's Map of Dublin", in Samuel A Ossory Fitzpatrick and William Curtis Green, *Dublin, a Historical and Topographical Account of the City* (London: Methuen and Co., 1907), the map can be found on a fold out page that is unnumbered, between pages viii and ix. This version uses a polynomial type 3 transformation done within QGIS.

¹³²¹ Donal T. Flood, "The Birth of the Bull Island", *Dublin Historical Record* 28, (1975).

from towns just outside Dublin like Dalkey, Dún Laoghaire and Howth and brought into the city. In the sixteenth century, these towns were far much further away from the city and also did not have the artificial harbours shown on the map, but they were nevertheless far easier to navigate into for ships compared to Dublin City itself.

Large amounts of land have also been reclaimed in the bay close to Dublin City. The areas of Rings End, the North Strand and the modern Docklands lie almost entirely on reclaimed land. Collins' map itself gives us clues as to the marine species that used to inhabit this area. Figure 6.1 below shows a close-up view of the map to see these place names more clearly.

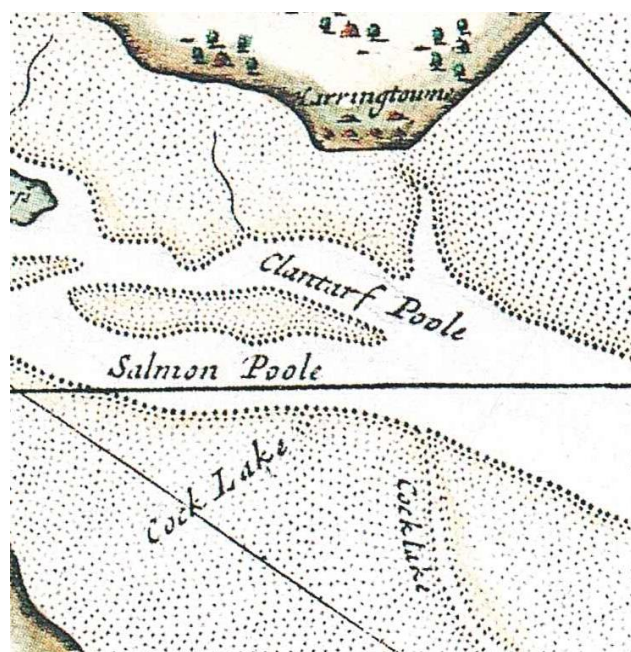


Figure 6.1 – Excerpt from Dublin and Dublin Bay by Captain Greenville Collins.

Just south of the modern Clontarf, a small village called 'Herringstowne' is marked on the map.¹³²² The name of the village suggests it was a site where herring fisheries were based, and the abundant sand and gravel beds in the bay would also have provided potential habitat for spawning herring.¹³²³ As shown in Chapter 3, there were herring fisheries in Dublin Bay in the sixteenth century, while no spawning herring populations exist in Dublin Bay today.¹³²⁴ South of Herringstowne is a channel marked 'Salmon Poole'; this suggests too that salmon were caught not just in the River Liffey, but also further out in the bay as they approached in the narrow channels. Further south again is an area marked 'Cock Lake'. The name suggests again this area would have provided habitat for cockles and the oysters discussed earlier.

¹³²² The name can be found on several other maps from earlier and later periods, Donal T. Flood, "Dublin Bay in the 18th Century", *Dublin Historical Record* 31 (1978), p. 129, 131.

¹³²³ Heessen, "ICES FishMap Species Factsheet: Herring".

¹³²⁴ O'Sullivan et al., "An Inventory of Irish Herring Spawning Grounds".

Today this area lies under where the modern Poolbeg Power Station stands. These examples show that coastal change has altered the physical structure of Dublin Bay and what species of marine life can live there and provide resources for fishing communities to harvest.

Collins' map is not an ideal source for understanding Dublin Bay in the sixteenth century, but it does illustrate to us the radical changes that have occurred in the bay in recent centuries. Dublin Bay demonstrates that parts of the Irish coastline were significantly different in the past and while we cannot quantify coastal change, it is still important to recognise that it has occurred, and in some cases, these changes have altered the nature of fisheries.

6.3.3 Environmental Influence on Fisheries

The final part of this chapter considers how natural environmental factors influenced fisheries in the sixteenth century. It will examine the latest research on Ireland's climate history and marine environmental history to help us understand the broader climatic shifts of the medieval and early modern period and how these may have impacted fishing operations. This section will also examine new research from the NorFish team that explores the mechanisms through which volcanic eruptions and plankton abundance have impacted historical fisheries.

In the past some historians have also used the natural migration of fish as an explanatory factor in the rise and fall of Ireland's fisheries from the fifteenth to sixteenth centuries. For example, Tim O'Neill, in his book *Merchants and Mariners*, claims that 'About 1450 the migrating herring from the Baltic appeared in increasing numbers in the North Sea, the Irish Sea and off the southern and western coasts of Ireland.'¹³²⁵ O'Neill writes that this event caused a boom in the fishing industry and stimulated the Irish economy, calling it 'the greatest single economic event of the two [14th and 15th] centuries'.¹³²⁶ This claim, or similar, have been repeated by other historians since. For example, Thomas McErlean, in his history of Strangford Lough, states that 'in the late 14th century', 'the herring which traditionally shoaled in the Baltic changed to the North Sea'.¹³²⁷ In her 2018 chapter on medieval Ireland's economy in the new *Cambridge History of Ireland*, Margaret Murphy cites O'Neill's claim without question.¹³²⁸

¹³²⁵ O'Neill, *Merchants and Mariners in Medieval Ireland*, p. 30.

¹³²⁶ *Ibid.*, p. 130.

¹³²⁷ McErlean, McConkey, and Forsythe, *Strangford Lough: An Archeological Survey of the Maritime Culture Landscape*, p. 137; See also, O'Dowd, *Power, Politics and Land: Early Modern Sligo 1568-1688*, p.149.

¹³²⁸ Margaret Murphy, "The Economy", in *The Cambridge History of Ireland, Volume 1: 600–1550*, ed. Brendan Smith (Cambridge: Cambridge University Press, 2018), p. 414.

Similarly, Ada Kathleen Longfield writes that the decline of Irish fisheries at the end of the sixteenth century was caused by a 'natural movement of the best shoals of fish from the Irish to the Newfoundland banks.'¹³²⁹ This claim has also been repeated by other researchers since.¹³³⁰ As appealing these explanations from O'Neill and Longfield may be, there is no scientific basis for these migrations to have taken place. Baltic herring is a separate subspecies of the Atlantic herring that populate Irish waters and the North Sea. The herring in the Baltic are adapted to their environment and are not capable of migrating out of the Baltic¹³³¹ While in the case of Newfoundland, the main targets of the Irish fisheries in the sixteenth century were herring and hake, while cod was the primary catch in Newfoundland. So not only is the ecological basis for Longfield's claim flawed, but the species targeted in Newfoundland was also entirely different from that targeted in Irish waters.

Ultimately, the explanations preferred by O'Neill and Longfield are too convenient and ignore the complexity of understanding fish migration and oceanographic change in the past. Historians since the time of O'Neill have also been too quick to repeat his claims without interrogating them or consulting the relevant literature from climate and marine science. Going forward, historians should be more comfortable consulting scientific literature and having conversations with marine biologists and other researchers to avoid repeating incorrect claims like those mentioned above.

While the claims of O'Neill and Longfield do not hold scientific water, there are real trends in both climate and fish migration that can help explain fluctuations in the fisheries over the fifteenth and sixteenth centuries. Herring do not migrate from the Baltic or cross the Atlantic Ocean, but they do exhibit regional patterns of migration on the Irish coast. As mentioned earlier, spawning herring populations fluctuate on the Mourne coast near Carlingford and the Isle of Man.¹³³² This natural change in spawning behaviour has influenced fisheries in the past. For example, as discussed in Chapter 2, in the year 1217, fishers from Ireland travelled en masse to the Isle of Man when herring became abundant there.¹³³³ No records specifically mention similar migration of fishers toward the Isle of Man in the sixteenth century, but fisheries

¹³²⁹ Longfield, *Anglo-Irish Trade in the Sixteenth Century*, p. 56.

¹³³⁰ See for example, Susan Flavin, "The Development of Anglo-Irish Trade in the Sixteenth Century", p. 66.

¹³³¹ Sangeet Lamichhaney et al., "Population-scale Sequencing Reveals Genetic Differentiation Due to Local Adaptation in Atlantic Herring", *Proceedings of the National Academy of Sciences* 109, no. 47 (2012). The impossibility of these migration was also confirmed to me by Dr Cordula Scherer, a marine biologist and postdoctoral researcher on the NorFish project.

¹³³² Dickey-Collas, Nash, and Brown, "The Location of Spawning of Irish Sea Herring (*Clupea harengus*)".

¹³³³ This was discussed in detail in Chapter 2, Hennessy, *Annals of Loch Cé* 1, LC1217.2, p. 257.

on the coast of Ulster did clearly decline toward the end of the century, so it is possible migration cycles were involved. Other research has demonstrated that winter and autumn spawning populations of herring in the Celtic Sea alternate in abundance year on year. This variability is driven by local conditions such as sea surface temperature but also global changes in climate.¹³³⁴

We also know that climatic shifts can influence what species were present on the coast and available for fishers to target. For example, a study of pilchards in the south of England has shown that, over the last 400 years, herring and pilchard alternate on the south English coast in response to changes in ocean temperature. The two species' geographical boundaries was also found to have alternated on a decadal scale, with pilchards becoming abundant on the coast when the temperature was warmer and herring booming when the temperature cooled. This study observed that the period from 1590 to 1640 was a particularly strong phase for pilchards in England.¹³³⁵ In the Irish case, pilchards were not an important catch during the sixteenth century, but in the trade data from 1621 to 1626, they suddenly became the most exported fish by far.¹³³⁶ This spike in exports suggests that Ireland experienced a similar boom of pilchards in the early seventeenth century and consequently that ocean temperatures around Ireland increased in this period.

Overall, the phenomenon of pilchard abundance and its related climatological triggers have not been studied in the same detail in Irish waters as they have in English.¹³³⁷ Irish researchers have shown little interest in the topic, and this may be because the pilchard fishery was very prominent in England in the early twentieth century and subsequently suffered a dramatic decline. No such boom and bust event occurred in modern Ireland, and consequently, pilchards have been given little notice by Irish fisheries scientists.¹³³⁸ However, in an article from 1946, Arthur Went observed that pilchards are not always present on the Irish coast and established a tentative timeline of those periods when they were abundant.¹³³⁹ Ingelise Stuijts and Liam Downey improved and built on this chronology in a 2016 publication.¹³⁴⁰ However, this data is

¹³³⁴ Clémentine Harma et al., "The Rise and Fall of Autumn Spawning Herring in the Celtic Sea Between 1959 and 2009", *Fisheries Research* 121 (2012), p. 31.

¹³³⁵ Southward, Boalch, and Maddock, "Fluctuations in the Herring and Pilchard Fisheries of Devon and Cornwall Linked to Change in Climate Since the 16th Century"; Woodward, "Irish Trade and Customs Statistics, 1614-1641".

¹³³⁶ See Chapter 4, Section 4.7, "Irish Trade and Customs Statistics, 1614-1641".

¹³³⁷ Jürgen Alheit and Eberhard Hagen, "The Bohuslän Herring Periods: Are They Controlled by Climate Variations or Local Phenomena?", *International Council for the Exploration of the Sea* 6 (1996).

¹³³⁸ Southward, Boalch, and Maddock, "Fluctuations in the Herring and Pilchard Fisheries of Devon and Cornwall Linked to Change in Climate Since the 16th century".

¹³³⁹ Went, "The Irish Pilchard Fishery", p. 119.

¹³⁴⁰ Ingelise Stuijts and Liam Downey, *Historical Farm and Fish Food Products* (Carlow: Teagasc, 2016), p. 22.

not extensive enough to correlate these periods of pilchard abundance with changes in ocean temperature. That remains an intriguing possibility for future researchers to investigate but would require a concerted research effort to achieve it.

Recent research from Bruce Campbell and Francis Ludlow examined Irish climate and society from the year 1000 to 1500. The authors combined a multitude of existing series of climate proxy data from natural archives to establish a timeline of how stable or otherwise Irish climate was over their study period. Proxies used include records of volcanic eruptions, solar irradiance, mean temperature anomaly, soil moisture and the North Atlantic Oscillation.¹³⁴¹ This proxy data was compared to qualitative accounts from the Irish Annals to understand the broader societal impact climate variability had on the island. This study is notable because it has established a spatially specific estimate for past climate and weather in Ireland; this is important as even conditions somewhere as close as England can differ wildly from those in Ireland in a given year.¹³⁴²

Over their whole study period, Campbell and Ludlow found that the decades from 1440 to 1460 were one of the 'most distinctive episodes on paleoclimatic record'.¹³⁴³ The conditions in that period led to poor harvests and significant cattle losses that contributed to social strife and hunger. The authors state that the disruptive climate conditions were caused by a series of volcanic eruptions, a first pair occurring in 1452 and 1457, and further eruptions in 1470, 1477 and 1480. These volcanic events have the potential to induce severe short term climate alterations. The impact of these eruptions was compounded by a 'weak solar forcing at the nadir of the Spörer Solar Minimum' in the later fifteenth century.¹³⁴⁴ Collectively these triggers caused rapid climate change across the northern hemisphere and Ireland. They contributed to 'Arctic winters and cool summers, and elevated level of environmental instability'.¹³⁴⁵

However, this climatically anomalous period may also have contributed to the growth of fisheries in the mid-fifteenth century. Recent and yet unpublished research from the NorFish team found that past volcanic eruptions led to a short-term lowering of ocean temperatures in the North Atlantic.¹³⁴⁶ Computer modelling that simulates a volcanic eruption predicted that

¹³⁴¹ Bruce M. S. Campbell and Francis Ludlow, "Climate, Disease and Society in Late-Medieval Ireland", *Proceedings of the Royal Irish Academy: Archaeology, Culture, History, Literature* 120C (2020), p. 165.

¹³⁴² *Ibid.*, p. 227.

¹³⁴³ *Ibid.*, p. 228.

¹³⁴⁴ *Ibid.*, pp. 228-229.

¹³⁴⁵ *Ibid.*, p. 229.

¹³⁴⁶ Francis Ludlow et al., "Explosive Volcanism as a Driver of North Atlantic Marine Productivity, Fisheries and Markets, 1400-1850 CE", (Forthcoming, 2021). This paper is a collaborative effort with several members of the NorFish team and Andrew Jackson from the zoology department at TCD.

much of the North Atlantic Ocean, including Irish waters, would experience significance cooling for five years after a volcanic event.¹³⁴⁷ This cooling would in turn lead to a greater abundance of plankton in effected waters and contribute to higher populations of cod and herring. The paper then applied superposed epoch analysis (SEA) methods to show that catches in the Newfoundland and Dutch herring fisheries experienced significantly increased catches in the years following eruptions. We do not have robust enough data to perform a similar statistical test for the Irish fisheries in the fifteenth century, but Scottish herring export data from Rorke over the period from 1473-1599 showed a similar trend, with exports peaking markedly four and five years after eruptions.¹³⁴⁸

The results of this paper and the work of Campbell and Ludlow suggest that a series of volcanic eruptions in the mid-fifteenth century could have contributed to a greater abundance of herring on the Irish coast that made fisheries more productive in this period. So, while O'Neill's claims that the migration of herring from the Baltic to Ireland stimulated the fisheries is false, it may be true that a period of anomalous climate conditions did stimulate the fisheries. As we explored in Chapter 4, the 1480s and 90s saw some of the highest herring exports across the fifteenth and sixteenth centuries. We lack the evidence to quantitatively prove the connection between climate and fisheries in this period, but all the evidence suggests that there were climatically favourable conditions from 1440 onwards. Furthermore, the documentary sources from the fifteenth century tell us there were significant losses of cattle and crops from the extreme weather, which led to famine.¹³⁴⁹ This loss of terrestrial food supplies may have forced more people to turn to the sea for sustenance. The Annals even hint at this, as a Gaelic Annal composed Dubhaltach Mac Fhirbhishigh notes that the extremely wet summers of 1443 and 1444 were 'good for fish but bad for bees and sheep'.¹³⁵⁰

As mentioned above, the main mechanism through which ocean cooling impacts fish populations is by increasing the productivity of plankton. Therefore, researchers on the NorFish project have recently attempted to understand how past changes in ocean temperature impacted the abundance of plankton in the North Sea.¹³⁵¹ The paper used the Atlantic

¹³⁴⁷ Ibid. For a more detailed explanation of the modelling see, Francesco S. R. Pausata et al., "Impacts of high-latitude volcanic eruptions on ENSO and AMOC", *Proceedings of the National Academy of Sciences* 112, no. 45 (2015).

¹³⁴⁸ Ibid, Scottish data from Rorke, "Scottish Overseas Trade, 1275/86-1597"; "Scottish Overseas Trade, 1275/86-1597 Vol. II".

¹³⁴⁹ Campbell and Ludlow, "Climate, disease and society in late-medieval Ireland", pp. 226-227.

¹³⁵⁰ Ibid., p. 225. The original Annals source is, John O'Donovan (ed.), 'The Annals of Ireland, from the year 1443 to 1468', *The Miscellany of the Irish Archaeological Society* 1 (1845).

¹³⁵¹ Cordula Scherer et al., "A Historical Plankton Index: Zooplankton abundance in the North Sea since 800 CE", *Under Review* (2020).

Multidecadal Variability index developed by Joseph Wang *et al.* to create a historical plankton index (HPI) that estimates the abundance of plankton in the North Sea from 800 to the present day.¹³⁵² This reconstruction showed that several periods over the last millennia saw elevated levels of plankton in the region, including from 1450 to 1600. As discussed, the start date of 1450 correlates well with the period in which Irish herring fisheries expanded. The authors also note that the early part of this date range ‘saw a marked European expansion of the fisheries’ outside Ireland as well.¹³⁵³ However, conditions in the North Sea do not necessarily reflect those in Irish waters, so we cannot say for certain that this reconstruction explains the rise of Irish fisheries. Although, it is encouraging that it matches well with the period in which Irish fisheries expanded. The combined evidence suggests that climatic and oceanographic conditions were favourable for fisheries to expand in the mid-fifteenth century, although the industry also benefited from and required a comparatively stable political and economic environment.

Concerning the decline of Irish fisheries toward the end of the sixteenth century, historians and climatologists have noted that the 1590s were a turbulent period for the climate in Europe. Tree ring data from the northern hemisphere has shown particularly cool growing seasons in 1591-1593, 1595-1597 and 1601-1602. A combination of natural phenomena potentially caused these abnormally cold years, including a reduction in solar energy due to a major sunspot and a greater frequency of El Niño episodes.¹³⁵⁴ As explored earlier, the 1590s were a tumultuous time politically in Ireland too; additionally, the decade saw persistent food shortages and harvest failures. Other parts of Europe also experienced similar political upheaval and famine conditions during the decade.¹³⁵⁵ We also know that herring fisheries failed in both Ireland and Scotland in 1597. These events hint at a common climatic link.¹³⁵⁶

Furthermore, the State Papers have a multitude of accounts that attest to the extreme weather experienced by the English army in Ireland during the Nine Years War.¹³⁵⁷ Some examples

¹³⁵² Jianglin Wang *et al.*, "Internal and External Forcing of Multidecadal Atlantic Climate Variability Over the Past 1,200 years", *Nature Geoscience* 10, no. 7 (2017).

¹³⁵³ Scherer *et al.*, "A Historical Plankton Index: Zooplankton Abundance in the North Sea Since 800 CE".

¹³⁵⁴ Geoffrey Parker, "History and Climate: The Crisis of the 1590s Reconsidered", in *Climate Change and Cultural Transition in Europe*, ed. Claus Leggewie and Franz Mauelshagen (Leiden: Brill, 2018), p. 122; For more on how volcanic eruptions could influence climate in Ireland see, Ludlow *et al.*, "Medieval Irish Chronicles Reveal Persistent Volcanic Forcing of Severe Winter Cold Events, 431–1649 CE".

¹³⁵⁵ Parker, "History and Climate: The Crisis of the 1590s Reconsidered", pp. 153-155; Guido Alfani, "The Famine of the 1590s in Northern Italy. An Analysis of the Greatest "System Shock" of Sixteenth Century", *Histoire & Mesure* XXVI (2011); Peter Clark, ed. *The European Crisis of the 1590's: Essays in Comparative History* (London: Allen & Unwin 1985).

¹³⁵⁶ The Lords Justices Loftus and Gardener and Council of Ireland to the Privy Council, 29 Nov 1597, SP 63/201 f.175, QFD ID 1230.

¹³⁵⁷ Hubert Lamb has also traced several major storm events that struck northern Europe in this period, Hubert Lamb, *Historical Storms of the North Sea, British Isles and Europe* (Cambridge: Cambridge

were already mentioned in Chapter 5, Section 5.2.10, but there are many more. For instance, in Sept 1601, Captain Charles Plessington reported from Lough Swilly that ‘the fiercest storm that ever man saw’ struck him there and lasted for ‘3 or 4 days’.¹³⁵⁸ During the campaign against the Spanish at Kinsale in November 1601, Lord Deputy Mountjoy wrote he hoped ‘God send us better weather than this; for it exceedingly hinders us and kills our men’.¹³⁵⁹ The direct impact of the extreme weather on shipping is detailed in a letter from May 1602 written by Sir George Carew; he wrote, ‘I have not dared to cross the Bay of Bantry, and we have had such storms of rain and wind that our ships have been in danger even riding in the harbour’. At the end of the letter, Carew writes that he ‘partly believed’ a Catholic priest called Archer was conjuring the weather because ‘the old men here never saw the like in May’.¹³⁶⁰ There are many more letters with similar descriptions of severe weather, not all of which can be described here.¹³⁶¹

These qualitative accounts, alongside the scientific data, show that the climate in the 1590s was particularly harsh and disruptive. The extremity of conditions in this period would have also impacted fisheries; by sinking vessels and dissuading fishers from venturing out and cutting off trade routes. Additionally, increased storm activity can also alter ocean conditions in Europe, leading to warmer waters that are less favourable to plankton and herring.¹³⁶² People in the fifteenth century even recognized that storms could drive herring away from certain areas. A statute concerning fisheries around Dublin in 1470 opened by saying ‘the herring fishery is always casual and removable by storms and winds from one place to another’.¹³⁶³ Overall, the climatically abnormal period during the late sixteenth and early seventeenth centuries probably contributed to and exacerbated the decline of Irish fisheries at that time.

Overall, it is a difficult task to unravel the connection between climate, ocean conditions and fisheries in the past. Anthropogenic factors further complicate this relationship, and it is not always easy to decide which influence had the greatest impact on the trajectory of the fisheries.

University Press, 1991). Francis Ludlow and Arlene Crampsie also comment on the environmental impact of the Nine Years War in their chapter in the new Cambridge History of Ireland, see Francis Ludlow and Arlene Crampsie, “Environmental History of Ireland, 1550–1730”, in *The Cambridge History of Ireland*, Volume 1: 600–1550, ed. Brendan Smith (Cambridge: Cambridge University Press, 2018), pp. 627-633.

¹³⁵⁸ Brewer and Bullen, *Cal. Car. MSS*, Vol. 4, 1601-1603, no. 54, p. 54.

¹³⁵⁹ *Ibid.*, no. 209, p. 192.

¹³⁶⁰ *Ibid.*, no. 386, p. 392.

¹³⁶¹ For more examples see, *Ibid.*, no. 33, p. 36; no. 35, p. 37; no. 209, p. 119; no. 145, p. 125; no. 150, p. 134; no. 214, p. 202; no. 238, p. 219; no. 267, pp. 261-263; no. 491, p. 499. There are many more examples in State Papers from the preceding years as well.

¹³⁶² Corten, “Herring and Climate: Changes in the Distribution of North Sea Herring Due to Climate Fluctuations”, p. 195.

¹³⁶³ This was discussed earlier in Chapter 4, Section 0, Berry, *Statute Rolls of the Parliament of Ireland, first to the twelfth years of the reign of King Edward IV*, 10 Edward IV., A.D. 1470, p. 665.

However, we can say that for the 1450s, when Irish fisheries expanded rapidly, and in the 1590s, when they suffered a decline, there are clear climatic events that likely contributed to the development and decline of the fisheries at those times. Going forward, much more research is required to understand the interactions between climate and fisheries in Ireland fully, but it is encouraging that new research by historians and scientists is opening the way for us to understand this topic to a far greater extent than before.

6.3.4 Conclusion

The natural environment had a range of powerful impacts on fisheries in the sixteenth century, and conversely, people from the past shaped and influenced the environments in which they lived. We might imagine environmental degradation and industrial pollution are only aspects of our modern world, but these issues were present in the sixteenth century. The science and philosophy that underlie the current environmental movement did not exist in the sixteenth century, but as we have seen, people cared about protecting aquatic environments and the fish that inhabited them. Furthermore, it seems likely that pollution and the construction of riverine infrastructure negatively impacted species like salmon from at least the sixteenth century and probably earlier.

Understanding the impact humans have had on sea fisheries is more complicated. Current quotas are not always the best metric to understand the sustainability of past fisheries. Fisheries in the sixteenth century were local and concentrated in a few key areas, while modern fisheries cover far larger areas much farther out to sea. In the case of herring, it is conceivable that intense fishing pressure on a few key spawning populations of the fish did have an impact on the stock. Furthermore, we must keep in mind that the physical structure of the coastline was radically different in many areas around Ireland in the sixteenth century.

Finally, contemporary scientific research provides a lens through which we can interpret historical fisheries. Historians of climate have shown that the 1590s was a particularly turbulent period in the weather of the northern hemisphere, and these abnormal conditions could have contributed to the decline of Irish fisheries at that time. Modern research also illustrates that fish populations were not static across the sixteenth century; some migration and changes in abundance would have taken place. However, there is little evidence to quantify or understand exact patterns in the migration of fish in the sixteenth century, although we can rule out the more outlandish ideas suggested by some historians regarding the migration of fish. This chapter has illustrated the necessity and value of combining historical information and modern

scientific research. Modern biology and ecology allow for a better understanding of patterns observed in the past. New research is allowing us to appreciate those key factors, such as the abundance of plankton, that drive fisheries and may have influenced the historical fishing industry. Ultimately, far more work remains to be done concerning the past environmental influence on fisheries, and this research holds great potential in identifying what drove past fisheries and providing lessons for fisheries today.

Conclusion

Their fishful bays, were taken from the Irish of the province of Ulster, and given in their presence to foreign tribes.

Annals of the Four Masters Volume Six, 1608, discussing the Flight of the Earls.¹³⁶⁴

As discussed in the introduction, historians have not given sufficient attention to the history of fisheries in Ireland. Those monographs written thus far have been vague and lacking in detail. Authors like Breen and Hamilton-Dyer have begun to change this in recent years, but there remains vast scope for furthering our knowledge of Irish fisheries history. The current thesis demonstrates the value and importance of studying fisheries in Ireland over shorter periods and in far greater detail than has been done before. The sources available to study fisheries in sixteenth-century Ireland are undoubtedly limited. However, this study overcomes this inherent limitation by employing a range of digital methods. The use of QDA methods allowed every detail relevant to the history of fisheries to be found and analysed from sources such as the Irish State Papers and records of the English High Court of the Admiralty.

The QDA employed in this study, while inspired by authors such as Robert Schwartz, were further developed and combined with the use of relational databases and data visualisation methods.¹³⁶⁵ By collating references in a central relational database, the Qualitative Fishing Database, information relevant to fisheries could be catalogued, categorised, and analysed for this study. These methods allowed the current project to move beyond anecdote in its discussion of qualitative evidence and instead present a comprehensive analysis of the most critical details related to fisheries from the study period. Additionally, by collating qualitative evidence in such a manner, the current study could present the quantitative assessment of qualitative information. Using QDA and GIS methods, Chapter 3 established many of the fundamental parameters of Ireland's sixteenth-century fisheries that were mostly unknown

¹³⁶⁴ Karen O'Brien, ed. *Annals of the Four Masters Volume 6* (Cork: CELT: Corpus of Electronic Texts), <https://celt.ucc.ie/published/T100005F/index.html>, M1608.2, p. 2363.

¹³⁶⁵ Schwartz, "Digital Partnership: Combining Text Mining and GIS in a Spatial History of Sea Fishing in the United Kingdom, 1860 to 1900".

before. We now know the most prevalent fishing locations, the nationality of the fishers who operated there and the species they targeted.

Through a combination of Irish evidence and secondary studies from other parts of Europe, this study illustrated the critical role visiting fishing fleets played in the maritime economy of sixteenth-century Ireland. We know that English, Spanish, and French fishers regularly visited Ireland and that specific regions along the coast developed complex systems to accommodate and tax these fisheries. Certain Gaelic Irish families profited from this activity and developed their economies around the visiting fishing fleets. In Gaelic Ireland, Baltimore, Berehaven, and Tyrconnell emerged as the dominant locations for foreign fishers to visit. In comparison, places like Carlingford, Carrickfergus and the River Bann hosted sizeable and organised English fisheries. Also, Old English towns such as Dublin, Waterford, Wexford, Cork, and others had active fishing fleets that operated locally and travelled to other parts of the Irish coast in search of catches. By combining a wide range of evidence from primary sources and existing studies, this thesis illustrated the scale of these foreign fishing fleets and their significance to the local economies of the places in which they operated. Furthermore, it has demonstrated that their presence in Irish waters declined over the century and ceased entirely by 1603.

At the beginning of the sixteenth century, only a few other places in Europe, such as Iceland, played host to visiting fishing fleets in this manner.¹³⁶⁶ However, as the sixteenth century progressed, distant water fisheries in Newfoundland would grow to become the most productive fishing operations in the whole North Atlantic. Many fishers who had previously come to Ireland would go on to fish in Newfoundland. It seems likely that those fishers developed skills in Irish waters that allowed them to prosper in the distant waters off Newfoundland. A limited amount of evidence also suggests that Irish vessels were engaging in fishing in Newfoundland from the 1540s. In this respect, Ireland was not an isolated island outside the broader development of European fisheries but was central to the general westward expansion of European fisheries that occurred in the sixteenth century. The current study also formed part of the more extensive NorFish project at Trinity College Dublin; a core aim of that project was to establish the parameters of the shift in European fisheries toward Newfoundland.¹³⁶⁷ At the beginning of the project, Ireland was not part of the general discussion on North Atlantic fisheries, but after this study, we can say with far more confidence how Ireland fits into the broader history of European fisheries.

¹³⁶⁶ Vesteinsson, "Commercial Fishing and the Political Economy of Medieval Iceland"; Childs, "England's Icelandic Trade in the Fifteenth Century: The Role of the Port of Hull"; Jónsson, "Fisheries off Iceland, 1600-1900".

¹³⁶⁷ Holm et al., "The North Atlantic Fish Revolution (ca. AD 1500)".

We now know that fisheries were of vital importance to the Irish economy in the fifteenth and sixteenth centuries and held a more critical role than has been attributed to them by historians so far. Ada Kathleen Longfield first illustrated the importance of the fish trade between Ireland and Bristol in the 1920s.¹³⁶⁸ In more recent years, the development of new data by Evan Jones, Margaret Condon and Susan Flavin has allowed us to understand this trade in far greater detail. The current study built upon this existing research by taking data from a wide variety of English and Welsh ports and combining it in a central, standardised database, the Fish Trade Database. The FTD is the first database of its kind to combine data from multiple sources to investigate the broader export trends of a specific Irish industry.

Additionally, through extensive research, the wide variety of units used in the early modern sources were converted to TLW. The use of a standard measure like TLW has allowed us to compare the relative amounts of fish traded between sources and over time, and even permitted us to compare historical catches to modern quotas and extractions. The data collected for the FTD illustrated that fish was by far Ireland's most significant export commodity in the late fifteenth and early sixteenth centuries. Fisheries were one of Ireland's principal and most productive industries in this period. The majority of fish exported from Ireland came from ports in the south-east of the country and Bristol was the principal trading partner of these ports. In addition, this thesis has established estimates for the total monetary value of fish exports and produced a limited price series for herring in the second half of the sixteenth century. That limited price series illustrated that it is possible to understand, albeit on a finite basis, the movement of prices in sixteenth-century Ireland, and show that, contrary to what other historians have said, Irish prices did fluctuate in this period.¹³⁶⁹

Due to a lack of sources, we know considerably less about the trade of fish from Ireland to continental Europe. As mentioned, continental fishers came to Ireland to make their own catches, and these activities were economically crucial to specific regions. These visiting fishers facilitated trade by exchanging luxury goods like wine for the right to fish too. Merchants from Europe also visited Ireland and exchanged goods for fish across the island, including with many Gaelic Irish families. However, we do not have the sources to quantify this activity, and the sum of the available evidence suggests the continental trade in fish from Ireland was not as significant as the trade to England. However, there does remain scope for researchers in the future to examine continental manuscripts for new details concerning Irish trade. The position of fish as the premier export commodity of Ireland declined as the sixteenth century

¹³⁶⁸ Longfield, *Anglo-Irish Trade in the Sixteenth Century*.

¹³⁶⁹ Gillespie, *The Transformation of the Irish Economy 1550-1700*, p. 9.

progressed and a combination of factors left the export trade in tatters by the year 1600. The fish trade would recover and adjust in the seventeenth century and beyond, but fisheries would never regain the economic status they held at the beginning of the sixteenth century.

The combination of qualitative and quantitative data told us that herring, hake, and salmon were the primary species exploited in the sixteenth century. This work outlined the variety of specialised methods fishers used to catch these species at different locations along the coast. Of these three, herring was the most important commercial sea species and a variety of fishing enterprises, both local and foreign, targeted them in Irish waters. This work also established that the life cycle of herring determined the nature of the fisheries that targeted them. Herring were caught at specific locations as they came close to shore during their spawning season. This natural behaviour made herring a predictable catch in most years but also made fisheries vulnerable. The natural migration and spawning patterns of herring can shift over time, and this has the potential to upend fisheries that depend on the regularity of spawning populations. Specific instances of this happening in the sixteenth century are difficult to find, but we know that in the early seventeenth century the nature of fisheries on the south coast of Ireland radically changed, as pilchards migrated north and replaced herring as the primary catch for several years.

Furthermore, this work has explored how the overexploitation of herring spawning grounds could, over time, lead to the depletion of local herring populations. Proving this definitively is difficult, but we can say that even fisheries in the sixteenth century had the ability to impact fish populations and unsustainable fishing practices likely contributed to the decline of the industry toward the end of the century. The anthropogenic effect on fisheries did not end with herring either; we know that people in the sixteenth century were aware that their industrial and agricultural activities could harm river fisheries. While we cannot quantify this impact, the qualitative evidence suggests that increased levels of pollution and the construction of riverine infrastructure could have contributed to the decline in salmon fisheries in sixteenth-century Ireland, as it did in other parts of Europe around the same period.¹³⁷⁰

As outlined above, the sixteenth century was a transformative period for Irish fisheries in many ways. In the year 1500, fisheries were one of the largest sectors of the Irish economy but declined considerably by 1603. This thesis has explored the combination of factors that contributed to that decline, not least among these was the impact of successive conflicts in Ireland across the century. Most of the violence in sixteenth-century Ireland was motivated and

¹³⁷⁰ Lenders et al., "Historical Rise of Waterpower Initiated the Collapse of Salmon Stocks".

related to the Tudor re-conquest of Ireland. Fisheries were often impacted by these conflicts incidentally, but also played an important role in Ireland's encounters with the English at many points. Chapter 2 began by outlining the fragmented and diverse nature of Ireland politics, and fisheries. Those distinctions are important because Gaelic Irish fisheries interacted with the English and experienced a very different pattern of change to those controlled by, for example, Old English towns.

All the fisheries in Ireland were damaged and disrupted to some degree by conflict. Successive wars destroyed infrastructure, depleted the population, and deterred fishers from operating. Towns like Kinsale, Cork or Youghal were directly involved in conflicts and suffered direct damage; but were largely able to recover in successive decades and into the next century. In contrast, Gaelic Irish fisheries, at Baltimore, Berehaven, Lough Foyle, Donegal, and many other places, had their ownership and access to fishing permanently transformed by English intervention. Fisheries would emerge again in places like Baltimore, but they would be fundamentally different in ownership and character. Ultimately, the systems and relationships that had allowed Gaelic Irish fisheries to operate and cater to visiting fisheries had been destroyed by the beginning of the seventeenth century.

Fisheries also played a role in the justification for English conquest and plantation. English writers and pamphleteers expounded the mismanagement and underuse of fishing resources by the native Irish while emphasising the benefits and profits the same could bring to their own people. The River Bann, for example, was one of the most valuable economic assets in Ulster and was crucial in the profitability of the English plantation there.¹³⁷¹ The presence of Catholic fisheries from continental Europe was a cause of particular concern for English writers and politicians, a concern that only grew as religious divisions increased across Europe during the sixteenth century. This thesis has shown that, as the sixteenth century progressed, English policy became increasingly hostile toward foreign fisheries, and ultimately the English would take control of access to all types of fishing in Ireland.

Furthermore, the English presence in Ireland drew the island into the broad geopolitical conflicts of the sixteenth century. These conflicts, in turn, brought pirates of all nationalities to Irish shores. By utilising QDA methods on the records of the English High Court of the Admiralty, this study has shown that piracy in Irish and adjacent waters spiked markedly at the end of the sixteenth century, in parallel with the Anglo-Spanish War of 1585 to 1604. Further qualitative examples illustrated the disruptive influence of this piratical activity. Pirates captured fishing

¹³⁷¹ O'Dowd, *C.S.P. Ire., Tudor Period 1571-1575*, no. 930.1, p. 566, QFD ID 731.

boats and merchants, and fishers were deterred from operating as the waters around Ireland became increasingly dangerous and lawless toward the end of the century.

Fish was also a crucial dietary item to many peoples in sixteenth century Ireland and held special religious and cultural significance. It further served an essential role in provisioning the English army in Ireland during the sixteenth century. Herring was the most commonly eaten fish by soldiers and citizens alike, but other species, such as cod, whiting and river fish featured in diets too. Old religious tradition dictated that meat should not be consumed on certain days of the week and during Lent, so people instead eat fish. The practice of fish days continued throughout the whole sixteenth century and resulted in the marked increase of fish consumption during Lent time. Towns like Dublin even had 'Lent store' to supply the population during the period.¹³⁷² However, the justification for these practices changed drastically during the century. While most of Protestant Europe abandoned the Catholic tradition of fasting, England retained fish days, but reframed them as secular law.

This led to a divergence in fish eating culture in Ireland, while the English army and towns like Dublin observed the secular fish days, Ireland's Catholics continued to consume fish for religious reasons. Gaelic poetry from the sixteenth and early seventeenth century illustrates the important place fish held in Irish culture. For example, poem *Mo-chean do theacht, a sgadáin*, written in 1630, praises the herring and its arrival to feed the people and clergy during Lent.¹³⁷³ Other poems speak of the health benefits of eating fish and the mythological past of the salmon. Additionally, species like halibut, were prized by the Gaelic Irish lords of Baltimore and must have featured prominently on their table when available. While we cannot say exactly how much fish the Gaelic Irish consumed, the literary evidence suggests that fish was held in high esteem and formed an important part of Irish diet and tradition.

The army ration records also illustrated that by the end of the sixteenth century, local supplies of fish in Ireland were becoming critically short in Ireland. In response to this, large amounts of Newfoundland cod began to be imported to the country. Much of this fish was imported from England, but enterprising Irish merchants like Nicholas Weston engaged in voyages to Newfoundland themselves and kept the English army supplied when other foodstuffs were failing. This work has illustrated how Newfoundland fish essentially saved the English war effort at the end of the Nine Years War by keeping the army fed. While Newfoundland fish was critical in this period, it would never catch on in Ireland as an item of mass consumption. Pirates ended

¹³⁷² Thomas Might to Burghley, 28 Sept 1580, SP 63/76 f.146, QFD ID 980; a similar statement was made by Might in October, Thomas Might to Burghley, 18 Oct 1580, SP 63/77 f.104, QFD ID 983.

¹³⁷³ *Mo-chean do theacht, a sgadáin*, poem 1, in Thomas F O'Rahilly, *Measgra Dánta: Miscellaneous Irish Poems, Part I* (Cork: Cork University Press, 1970).

the personal enterprise of merchants like Weston, which may have deterred other Irish merchants entering the trade. Also, we know that English soldiers disliked the fish, both in taste and preparation. The same negative perception may have spread to the general population. Finally, broader economic trends may have meant it was simply more profitable for English and Irish merchants to exchange Newfoundland fish for wine in Spain, essentially mirroring the earlier practices of Spanish fishers who visited Ireland.¹³⁷⁴ Overall, while we have less evidence for fish consumption that we have in other areas, we can say that fish was an essential part of diets for citizens and soldiers in Ireland. There further existed a deep cultural connection to fish in Ireland, but one that was shifting as new ideas and products reached Irish shores in the sixteenth century.

Finally, new research and the use of natural archives is providing us with a far clearer picture of how climate in Ireland has changed in the past, and how these changes impacted society. Historians since Tim O'Neill have attributed the growth of Irish fisheries in the mid-fifteenth century to unfounded claims about the migration of fish to Irish shores. While those claims were false, this work has demonstrated that climate conditions in that period were in fact favourable to for fisheries to develop. Recent research from the NorFish team explored how volcanic eruptions can stimulate growth in fish populations by increasing the number of plankton in the ocean. These climatic events do not fully explain why fisheries expanded in Ireland when they did, but they likely aided the development of the industry at a time when the other anthropogenic factors were favourable. Likewise, the 1590s was a climatically tumultuous period that saw long periods of unseasonable weather and a significant increase in extreme weather events. This change in climate likely combined with the already disruptive effect of the Nine Years War to cause a collapse the fisheries industry at that time.

Ireland is defined by the seas and oceans that surround it; the coastline is marked by towering cliffs, windswept beaches, abundant bays and thriving river estuaries. Some of the stormiest seas on the planet bash the west coast, while the Irish Sea has been a conduit for trade, migration, and invasion for centuries. The Gulf Stream of the North Atlantic Ocean brings warm water that tempers Ireland's climate, impacting the land and all those who live on it. However, the oceans are also under threat; overfishing, pollution and the altering effects of the climate crisis are imperilling the balance of the oceans and jeopardising their ability to support life, both aquatic and terrestrial.

¹³⁷⁴ Pope, *Fish Into Wine*.

The same is true of riverine ecosystems. Already many of Ireland's rivers have been irreparably damaged by infrastructure projects and pollution.¹³⁷⁵ These points are relevant because they entreat us to study aquatic and marine environments and our interactions with them in the past. This study has shown us that fisheries were crucial to sixteenth-century Ireland, but also demonstrates the fragility of those fisheries and the environment on which they relied. Humans created the problems we face today, and these problems require a human solution. History and the humanities are vital to this; we cannot adequately face the present challenges without understanding how people interacted with and influenced the environment in the past. Ultimately, there remains vast scope for future studies to continue the story of Irish fisheries up to the present day.

¹³⁷⁵ *Hydrobiologia* 609 (2008); the EPA also reports on the health of water bodies in Ireland, Environmental Protection Agency, "EPA Irish Water " 2020) <https://www.epa.ie/irelandsenvironment/water/>.

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