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Hugh R. Milner

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CONSTRUCTING AND EXPERIENCING THE MEDIEVAL WADDENLAND

by

Hugh R. Milner

A thesis submitted to the Graduate College
in partial fulfillment of the requirements
for the degree of Master of Arts
Medieval Studies
Western Michigan University
December 2020

Thesis Committee:

Robert Berkhofer, Ph.D., Chair

Jim Murray, Ph.D.

Jana Schulman, Ph.D.

CONSTRUCTING AND EXPERIENCING THE MEDIEVAL WADDENLAND

Hugh R. Milner, M.A.

Western Michigan University, 2020

Part of the intertidal zone along the southeast portion of the North Sea, the Wadden Sea Coast runs from modern Friesland and Groningen in the Netherlands, through Lower Saxony and Schleswig-Holstein in Germany, and up the west coast of Jutland to just past Ribe. This project seeks to understand medieval responses to an environment in constant contact with the sea via documentary and historical sources. The people of the Wadden Sea Coast defined their landscape and their history in part with earthworks and water infrastructure, negotiating control of both anthropogenic and natural environments.

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CHAPTER I

INTRODUCTION

The Wadden Sea Coast (WSC) consists of a series of 39 tidal basins, through which tidal flows are much greater than along the coasts of other portions of the North Sea. The modern UNESCO world heritage region further incorporates the coastal waters, the Wadden Islands, and portions of the estuaries of the Ems, Weser, and Elbe rivers, running from Den Helder in Holland to Varde in southwestern Jutland (see figure 1).¹ While each tidal basin is itself a discrete area, the region is unified by the pattern of geological features shared by its constituent units. Along the WSC, salt marshes, peat bogs, and tidal flats dominate, creating an environment that often made agricultural challenging.² The High and Late Middle Ages saw the widespread clearance and reclamation of land for human use, and the medieval alterations of the WSC need to be evaluated as part of this process. Yet it is not only a change in the physical landscape we must look for, as the period immediately after the twelfth century recorded an increasing number of images of water infrastructure in manuscripts across Europe, a sign of the growing importance of water management systems to medieval society.³

While the WSC can be defined solely by its natural environment, in truth much of it was formed in dialogue with the inhabitants of the region. The modern Waddenland is often described as a “wilderness” environment, but it is critical to recognize that the region is not pristine, possessing not only numerous dikes and their remnants, but an ecology and hydrology

¹ “Wadden Sea: Taking Shape,” Common Wadden Sea Secretariat, accessed November 10, 2019, <https://www.waddensea-worldheritage.org/taking-shape>.

² Dirk Meier, “Man and Environment in the Marsh Area of Schleswig-Holstein from Roman until late Medieval Times” *Quaternary International* 112 (2004): 55; see glossary for more on peat bogs.

³ Paul Benoit and Joséphine Rouillard, “Medieval Hydraulics in France,” in *Working with Water in Medieval Europe: Technology and Resource-Use*, ed. Paolo Squatriti (Boston: Brill, 2000), 164.

heavily altered by these manmade marks on the landscape.⁴ Instead, much as the WSC is a contact zone between land and sea, so too is the region a place where varying human interactions and uses of the environment meet. As such, understanding the WSC, along with the urban centers lying within and immediately inland from these tidal regions, requires accepting both surface variation and underlying uniformity, considering both human and natural forces.

This process is well underway when considering the WSC as both a geographic phenomenon and as a modern heritage site. Yet while acknowledging the significance of the Middle Ages in defining the human impact upon and relationship with the landscape, it is neglected as a medieval region of study.⁵ There is therefore a need to deepen an understanding of the medieval Waddenland, its political divisions, and common experiences of and approaches to human interactions with their environment.

While an environment that can be clearly defined from a geographic standpoint since well before the Middle Ages, the WSC was a mishmash of political forces throughout the period that stymied any overarching political unity. However, the WSC can be seen as a coherent medieval region through the shared challenges of coping with and exploiting an often-hostile environment, similar techniques for land reclamation and water management, and finally shared responses to the environmental problems of the fourteenth century. It is in this context that the reception of and relationships with nature must be evaluated. This thesis will draw from several texts across the WSC to pursue this end.

⁴ Hans Renes, "The Wadden Sea Region as a Cultural Landscape," in *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press, 2018), 47.

⁵ See *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press, 2018); while acknowledging the High Middle Ages as a defining period for the region, only one of the collected essays focuses specifically on the medieval Waddenland, and there the focus is on Rungholt during the 1362 Grote Mandrenke. This demonstrates the problem of scholarship regarding the WSC either only giving partial treatment to the medieval history of the region or having too narrow a focus to see the region as a whole.

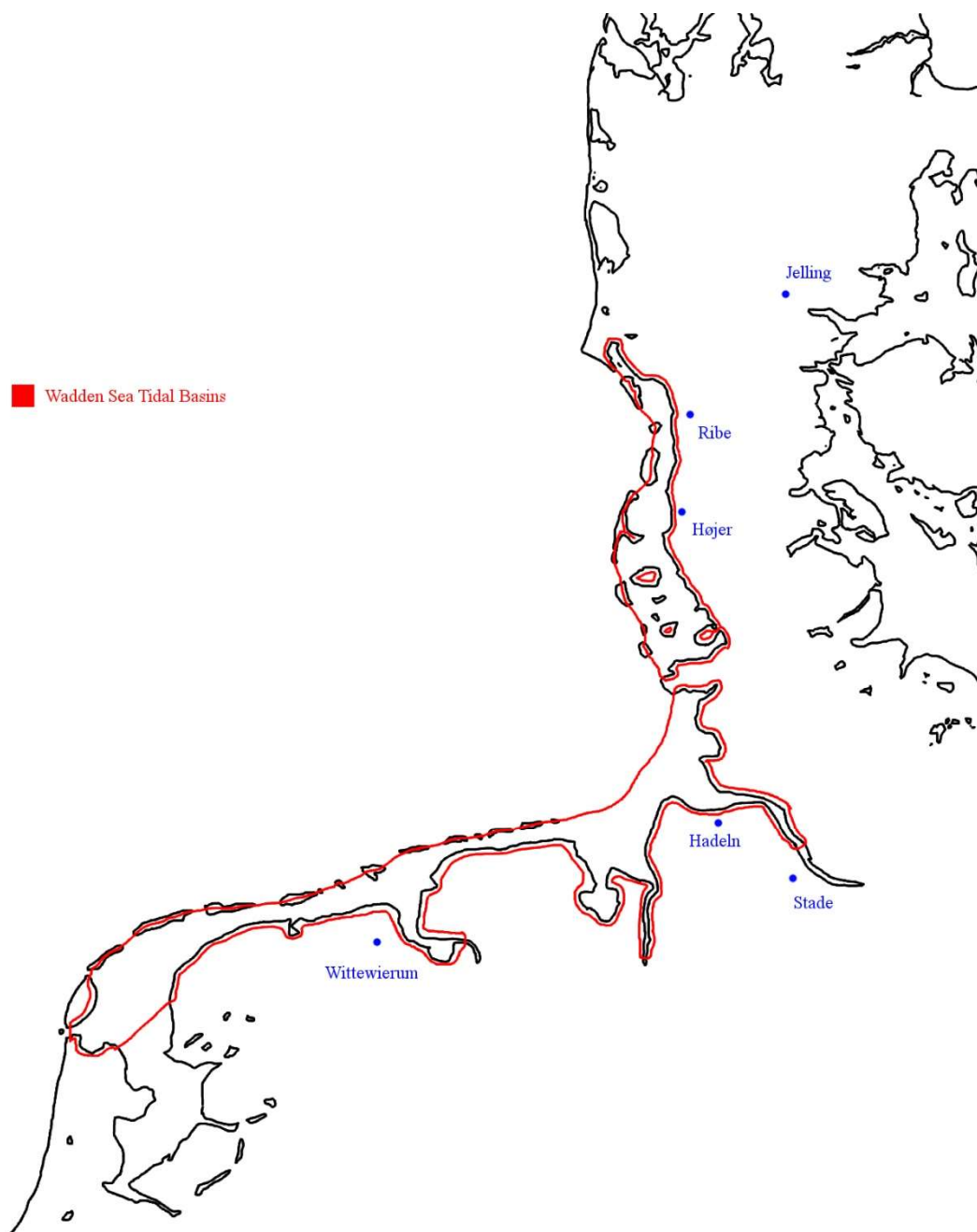


Figure 1: Wadden Sea and Notable Locations. The Wadden Sea Coast, with some of the locations from the texts (and their own origins) marked. The tidal basins making up the Wadden Sea are marked in red (Common Wadden Sea Secretariat. “Wadden Sea: Taking Shape.” Accessed September 13, 2020. <https://www.waddensea-worldheritage.org/taking-shape>).

Political Disunity

Despite a modern emphasis on shared geography, the WSC has never seen total political unity. A geographically contiguous region can often be seen as a precursor to political unity – for instance, Sverre Bagge argues that Scandinavia’s geography helped divide it, creating three separate regions for nations to develop within.⁶ Yet the WSC’s lack of any such natural geographic divides did not lead to one dominant political force expanding over the whole region. Instead, the region was split both between realms and more locally by particularist interests that prevented widespread political unity. The major powers of France, Denmark, and the Holy Roman Empire, as well as the subject regions within these larger entities, helped shape a set of endlessly shifting borders.

Despite France’s importance in the politics of western and northern Europe, the French kings themselves had little direct influence in the WSC. The County of Flanders, nominally a French subject in this period, was an insulating force between France and the WSC. Yet even given Flanders’ eventual political consolidation and incursion into the WSC, Geoffery Parker notes that by the time they were nominally united into the Burgundian state, “Brussels and Antwerp were in many ways closer to Paris and Cologne than they were to Amsterdam and Groningen.”⁷ Further separating access from the west to the Wadden Sea Region was Holland, only acquired by the growing Habsburg power in Burgundy in 1428 as a prelude to their expansion into the WSC proper.⁸ This divide suggests that the Low Countries cannot be fit into some uniform model, internally unified and with sharp boundaries at the edge. Instead, the

⁶ Sverre Bagge, *Cross & Scepter: The Rise of the Scandinavian Kingdoms from the Vikings to the Reformation* (Princeton: Princeton University Press, 2014), 29, 33.

⁷ Geoffrey Parker, *The Dutch Revolt* (Ithaca: Cornell University Press, 1977), 22-3.

⁸ Friedrich Uhlhorn and Walter Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13*, (Stuttgart: Deutscher Taschenbuch Verlag, 1974), 40-1.

easternmost regions of the coastal Low Countries were also drawn towards the political and cultural dynamics of the WSC.

At the other end of the region, Denmark's presence remained limited to a small area. The kingdom possessed only the Jutland extent of the WSC and slowly exerted control over Schleswig and Holstein. While the Norse were responsible for the trading settlement of Haithabu, the duchy of Holstein in which it lay would be only inherited by Danish monarchs in 1460.⁹ Schleswig, while generally under control of the Danish kings, was instead inherited by a younger son of King Waldemar II of Denmark in 1241. It was thereby separated from the crown's control for two decades until its forcible return to the control of Denmark in 1261. To the West of these two territories fell North Friesland and Dithmarschen, which managed to avoid Danish attention until later.¹⁰ Denmark's borders, cutting across the WSC, were defined in part through the use of the Danevirke. Although the constituent fortifications themselves are placed on the eastern side of the Jutland peninsula (and thus not itself on the WSC), it completes a line across the base of the peninsula begun by the Eider and Treene rivers, which do feed into the WSC.¹¹ While the Danevirke reflects "many *different* [sic] forms of royal power, depending on varying historical situations,"¹² ultimately at each point the fortifications helped turn the partial natural barriers of the Eider and Treene rivers into a fully-fledged territorial divide (see figure 2). In a way, it took the place of natural border lines that the WSC's geography could not provide, but Denmark's later acquisition of Holstein (not to mention modern movements of the border) suggest that this manmade barrier did not ensure a permanent division along this line.

⁹ Bagge, *Cross & Scepter*, 34, 49.

¹⁰ Uhlhorn and Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13*, 52-4.

¹¹ Andres Siegfried Dobat, "Danevirke Revisited: An Investigation into Military and Socio-political Organisation in South Scandinavia (c AD 700 to 1100)," *Medieval Archaeology* 52, no. 1 (2008): 27-8, 35-7.

¹² Dobat, "Danevirke Revisited," 61.

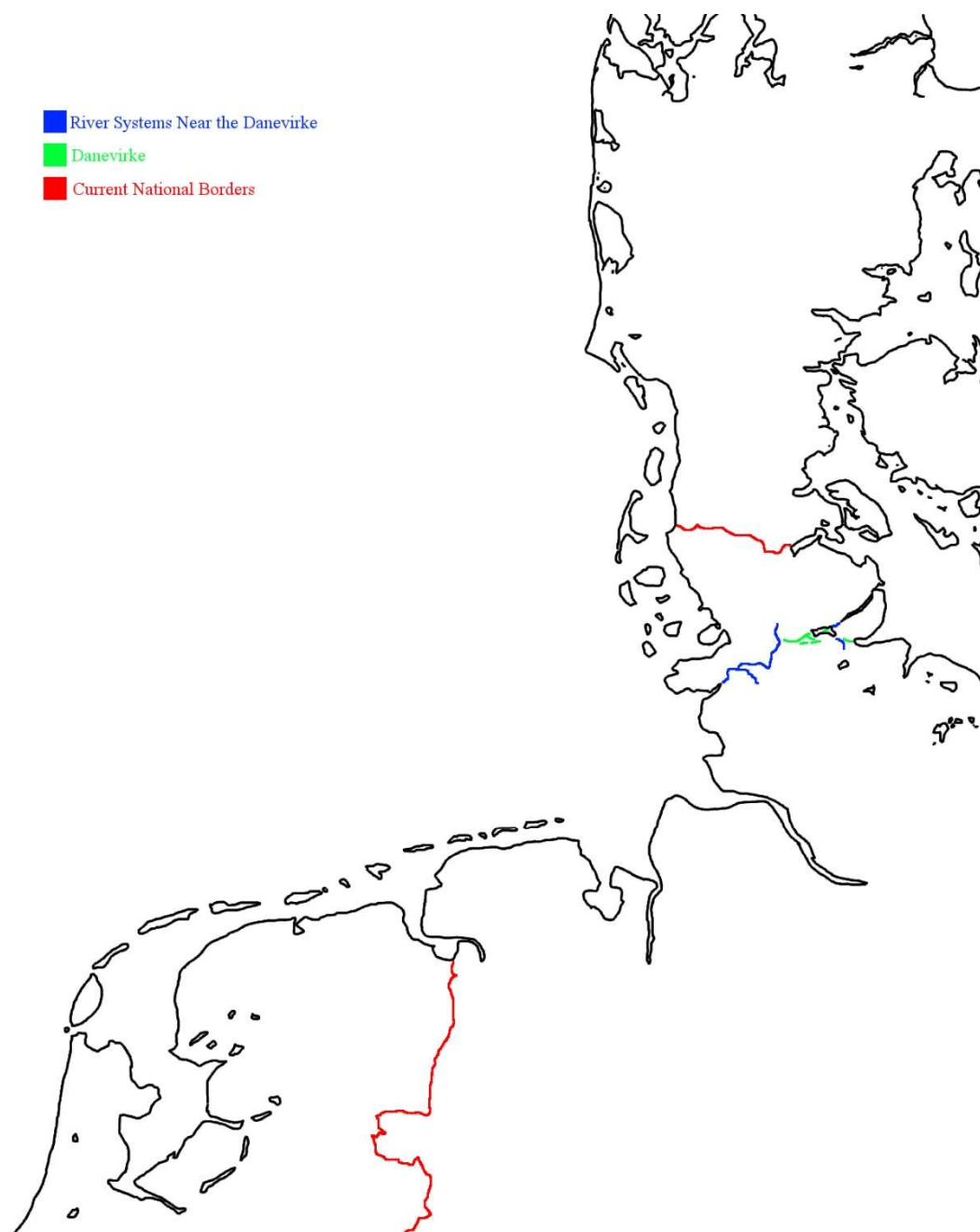


Figure 2: Modern National Borders and Danevirke. The modern national borders running through the Wadden Sea Coast. The Danevirke is also marked, along with the river systems that complete its boundary-line across the Jutland peninsula (Dobat, Andres Siegfried. "Danevirke Revisited: An Investigation into Military and Socio-political Organisation in South Scandinavia (c AD 700 to 1100)." *Medieval Archaeology* 52, no. 1 (2008): 27-67)

The majority of the WSC was taken up by polities at least nominally subject to the Empire. Within this portion of the coast, three broad regions can be identified. To the west are the small semi-independent polities within Friesland (today split between Westfriesland in the Netherlands and Ostfriesland in Germany). To the north sat Schleswig and Holstein, the aforementioned territories that often acted as a border zone between Germany and Denmark. The territory between the Elbe and Weser rivers were dominated by the Archbishop of Hamburg-Bremen.¹³ The dominance of the archbishop here should not be surprising, given that the two cities from which the archbishopric takes its name are the primary cities on these two rivers. Ostfriesland itself shattered during the eleventh century into numerous communities before coalescing under seven “Seelande,” whose prized particularism was the source of the idealized “Friesichen Freiheit” (“Frisian Freedom”). In the wake of or even as a result of the economic and ecological downturn of the late thirteenth and fourteenth centuries, the region began to be reunified under the Brook family, namely under the leadership of Otto I tom Brok in the second half of the fourteenth century.¹⁴ By contrast, Oldenburg saw the earlier rise of a single family, which explicitly tried with mixed success to expand into Friesland and across the Weser river. Claiming descent from Widukind, the counts of Oldenburg took on the title *comes in confine Saxoniae et Frisiae* (“count within the border of Saxony and Frisia”) in the early twelfth century.¹⁵ By declaring this ambition the counts of Oldenburg positioned themselves to expand their control over much of this region. Despite this lofty goal, by the end of the fourteenth century Oldenburg found itself merely restraining the expansion of the Brook family to the

¹³ Uhlhorn and Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13*, 32-3.

¹⁴ Uhlhorn and Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13*, 41-2; Hans Pusen, *Niedersachsen: Der Norden u. d. Hansestädte Bremen u. Hamburg. Landschaft, Geschichte, Kultur, Kunst* (Nürnberg: Glock und Lutz, 1973), 15.

¹⁵ Pusen, *Niedersachsen*, 22.

West.¹⁶ Oldenburg's eastern exploits were similarly unsuccessful and they had to give up their claims to Bremen in 1345,¹⁷ not to mention their failure to challenge Denmark's growing power in Schleswig and Holstein. The conflicting goals of local rulers, each laying claim over parts of the WSC, stood in the way of a single power becoming dominant.

From c. 1100 to c. 1400, the WSC's broadly contiguous territory was broken into a patchwork of polities often in conflict with one another. While by the fourteenth century growing powers were consolidating control and reducing the number of independent forces in the region, this process never progressed to the point where unity along the WSC was achieved. Instead, power crystallized into a series of local rulers, each competing with each other and against any incursion of larger powers centered outside the region.

Political Ties, Personal Connections, and Spreading Settlement

While lacking a unified political identity, the WSC nevertheless saw a series of connections and exchanges that helped tie the region together. Political alliances through the Hansa demonstrate the importance of trade networks across the Wadden Sea. The movement of people to political offices and urban communities demonstrates the degree to which borders were permeable. But perhaps above all else, the process of diking along the WSC necessitated the movement of large groups of people. Rulers along the entirety of the coast encouraged colonization by people from across and beyond the region who brought with them the techniques necessary to reclaim land.

The Hansa provide a more effective framework for seeing unity in the WSC than political hegemony. The rivers flowing into the sea through the WSC provided fertile opportunities for

¹⁶ Pusen, *Niedersachsen*, 15.

¹⁷ Uhlhorn and Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13*, 42-5.

the growth of cities and trade in the region.¹⁸ Rather than looking for overarching political entities to offer cohesion, communities with shared interests pooled resources and combined forces to seek economic and political goals. Cities often benefitted from the trade opportunities created by cooperative action, but not all relationships were positive – as one example, the city of Schleswig slowly lost ground to new urban areas, especially Hamburg.¹⁹ Not all alliances were made locally, as while the Lower Saxon towns were drawing together around 1246, Hamburg instead fostered alliances with Baltic cities.²⁰ It is, however, worth noting that the main commercial offices of the Hansa were not to be found in the WSC.²¹ While the WSC sat in the geographic center of the Hansa's broad network of trade and urban power, it was not the hub of the organization's political power or the focus of the Hansa's efforts. It was no more core to the Hansa than it was to the political powers that divided the region. However, by the thirteenth century German merchants in the WSC had at least general control of the terms of their trade due to the initiatives of the Hansa.²² Although tying the urban areas of the WSC together economically allowed them to engage in trade together and on their own terms, it did not do so in a way that privileged a central authority in the region.

Political control was also not always indicative of regional identity or affinity. For Denmark, access to major bodies of water divided the kingdom between the Wadden Sea, the North Sea, and the Baltic Sea.²³ Southwestern Jutland had more in common with the Wadden Sea Coast in which it lay than it did with the rest of Denmark. Unlike the rest of the kingdom, cattle farming remained a prominent part of the rural economy in the Wadden Sea-adjacent

¹⁸ Tom Scott, *Society and Economy in Germany, 1300-1600*, (Basingstoke: Palgrave, 2002), 24.

¹⁹ Johannes Schildhauer, *The Hansa: History and Culture* (Leipzig: Edition Leipzig, 1985), 20.

²⁰ Schildhauer, *The Hansa*, 39.

²¹ Scott, *Society and Economy in Germany, 1300-1600*, 25.

²² Schildhauer, *The Hansa*, 37.

²³ Hybel and Poulsen, *The Danish Resources*, 57.

portions of Denmark and Schleswig.²⁴ This is in keeping with the use of marginal, marshy land for pasture, as seen throughout the WSC and into the Low Countries.²⁵ The draw towards a Wadden Sea sphere of influence for southwestern Jutland was only strengthened by the presence of the Hansa markets.²⁶ As such, the economic foundation of southwestern Denmark was built upon the same maritime access and agricultural regime as the rest of the WSC, trends that incorporation into the medieval kingdom might have disguised but did not change.

Travel helped create personal links between the politically disparate populations of the WSC that went well beyond trade. While being native to one or another realm, powerful figures in the Church could come from far afield. Helias, bishop of Ribe from 1142-62, was initially a refugee from Flanders, traveling across the whole of the WSC before taking office.²⁷ Travel throughout the North Sea therefore meant no Wadden Sea community was truly isolated from another. Urban communities were a primary source of these connections, with thirteenth-century statutes in Ribe mentioning the presence of foreigners.²⁸ The rapid rate of change in the region's borders not only lent itself to ongoing territorial disputes, but to highly permeable borders.²⁹ Yet the movement of people was not constrained only to individuals and small urban communities. Settlement was another force driving populations to cross borders, with the archbishop of Hamburg-Bremen encouraging settlement at the mouths of the Elbe and Weser rivers in 1113.³⁰

²⁴ Hybel and Poulsen, *The Danish Resources*, 199.

²⁵ William H. TeBrake, "Hydraulic Engineering in the Netherlands During the Middle Ages," in *Working with Water in Medieval Europe: Technology and Resource-Use*, ed. Paolo Squatriti (Boston: Brill, 2000), 110.

²⁶ Hybel and Poulsen, *The Danish Resources*, 213.

²⁷ Michael H. Gelting, "Cronica ecclesiæ Ripensis," University of Bergen, Accessed November 10, 2019, https://wikihost.uib.no/medieval/index.php/Cronica_ecclesi%C3%A6_Ripensis.

²⁸ Nils Hybel and Bjørn Poulsen, *The Danish Resources c. 1000-1550: Growth and Recession* (Leiden: Brill, 2007), 138.

²⁹ Kathrin Zickermann, *Across the German Sea: Early Modern Scottish Connections with the Wider Elbe-Weser Region* (Leiden: Brill, 2007), 2-3.

³⁰ Bas van Bavel, *Manors and Markets: Economy and Society in the Low Countries, 500-1600* (New York: Oxford University Press Inc., 2010), 40-1.

In turn, settlers from both Saxony and Holland moved to the area of Dithmarschen and western Holstein to begin dike construction and marsh colonization in the twelfth century.³¹ The technique of *cope* reclamation, where land was divided into long strips radiating off either a river or canal, was imported, along with the practice of establishing clear legal rights for these new settlers.³² German settlers moved to the east (particularly to the Baltic coastline) in the same period, but they may also have moved into Denmark, particularly into the royal lands near Ribe in Jutland, continuing the flow of people from one end of the WSC to the other.³³ Throughout the Middle Ages, the WSC therefore saw a steady movement of people to the coasts and towards the East and the North, as local rulers hoped to engage in the same water management practices and propagate the relevant skill sets among their subjects.

Expanding settlement and drainage might not always serve as a source of unity – on the border of the WSC, the Count of Holland encouraged investment in reclamation, but it came at the cost of granting privileges, including that of the right to build “moated sites,” thereby increasing local independence.³⁴ Rather than merely supporting more central powers like the counts of Holland, reclamation in the WSC also increased the potential for local particularism behind newly constructed fortifications. But, as a whole, trade, contact, and settlement throughout the WSC help demonstrate the ties between the medieval peoples of the region lost in a simple political map.

³¹ Hans Joachim Kühn, *Die Anfänge des Deichbaus in Schleswig-Holstein* (Heide: Westholsteinische Verlagsanstalt Boyens & Co., 1992), 12-3.

³² Jan van Doesburg and Bert Groenewoudt, “Medieval Reclamation and Land use in the Netherlands,” in *The Archaeology of Medieval Europe, Vol. 2: Twelfth to Sixteenth Centuries*, ed. Martin Carver and Jan Klápště (Aarhus: Aarhus University Press, 2011), 75-6; Paul Arblaster, *A History of the Low Countries*, 2nd ed (New York: Palgrave Macmillan, 2012), 60.

³³ Hybel and Poulsen, *The Danish Resources c. 1000-1550*, 30-1.

³⁴ Brian Ayers, *The German Ocean: medieval Europe around the North Sea* (Sheffield: Equinox, 2016), 42.

Clearance, Water, and Consequences

The process of settlement was integrally tied to the management of land and water on the WSC. All communities had a similar set of priorities, needing to both access water and ensure their safety from it. In the wake of increased storminess and subsidence problems in the late thirteenth and fourteenth centuries, all communities found themselves forced to compensate, and all parts of the WSC saw tragic examples of when such measures failed.

The examples of Bremen and Ribe show the importance of urban areas' control of water access for trade and personal needs. After the construction of a monastic community and cathedral in the late-twelfth century, three large dams were built through the city of Ribe during the thirteenth century, linking the city across the river and controlling the water supply that fed the royal mill.³⁵ In environments where water defined landscapes, dams gave a degree of control over the landscape and one of its primary features. They turned water into a usable resource and put this resource under direct control of the mill's owners, Denmark's kings. The dams reinforced structures of social order, tying together a community to the cathedral as the centerpiece of a nascent urban community. They even played a role in town defense, with the canalized river and earthen ramparts being the only real fortifications needed outside a brick gate.³⁶ In Bremen, a city lying along the Weser river in modern-day Germany, the challenges of water access led to similar coordination. While not truly replacing individual wells, Bremen began to establish a central water supply by the end of the fourteenth century, which helped offset the labor cost of drawing water from wells as well as helping provide for urban firefighting. As part of this, a 1394 charter provided for an association that constructed the water

³⁵ Ayers, *The German Ocean*, 60.

³⁶ Ayers, *The German Ocean*, 129.

wheel at the heart of this infrastructure, while later documents reflected the ongoing need to regulate the new infrastructure and prevent abuses.³⁷ Water infrastructure management thus began to supersede the local organization of wells to support increasing needs. Even the original wells were not individual property, as they were generally used by several households.³⁸ Yet total control of water resources was not always possible, as Ribe discovered. As the city was dependent on the Ribe Å (the Ribe River) for sea access and unable to canalize its entire extent, the river's winding nature eventually led to Ribe's isolation and economic decline.³⁹ Access to and control of water resources was therefore a common element in defining urban infrastructure and geography.

Safety from floods can also be used to understand the expansion of urban communities. The cities of Stade and Hamburg dumped vast quantities of soil to infill marshes and expand the area stable enough for the urban community.⁴⁰ With the availability of stable land extremely limited, any land created increased the property and thus the power of the polity that built it, in this case major urban centers. These projects were also a way to improve the urban economy, with more land supplying increasing populations and expanding industry. Defense against water helped define urban areas just as controlling water access and supply did.

While drainage and clearance demonstrate ties across the Wadden Sea Region through the movement of people, water management forced local connections through the need to coordinate efforts. Dina Spiekhoust and Theo Spek's work on the castles of Goor and Diepenham argues that the external impacts of alterations to the watercourses of either polity's lands would

³⁷ Klaus Grewe, "Water Technology in Medieval Germany," in *Working with Water in Medieval Europe: Technology and Resource-Use*, ed. Paolo Squatriti (Boston: Brill, 2000), 156.

³⁸ Grewe, "Water Technology in Medieval Germany," 155.

³⁹ Ayers, *The German Ocean*, 69.

⁴⁰ Ayers, *The German Ocean*, 155-7.

have downstream (or indeed upstream) impacts on the other, and suggest that conflict between the two between 1145 and 1150 are a direct result of this.⁴¹ While castles themselves sometimes created their own local political regions through the power projected by fortified sites, they could not successfully exist independently.⁴² What benefitted one lord might well harm another, requiring compensation or becoming a source of conflict. Although these two castles lay outside the WSC, conflicts over the impacts of water management infrastructure would have been no stranger to the people of the WSC. Medieval rulers were evidently not blind to the existence of externalities, the costs incurred by an action that are not directly paid for by the one taking it. This effort to preserve and even improve productivity that recognized the broader impact is consistent with modern understandings of land management, which emphasize how land degradation consists of both “on-site” and “downstream” consequences.⁴³ Even at a local level, the numerous sociopolitical actors found themselves forced to interact, either through cooperation or conflict, to ensure their own survival.

For all communities of the WSC, engaging with the resources of their amphibious environment was a necessity. Even into the eighteenth and nineteenth centuries, farms themselves might not be the primary source of income, with many dependent upon fishing or reed gathering.⁴⁴ That the medieval Waddenland should look to the sea is no surprise, given the strong market for a fishing industry that could be built off the perpetual demand of urban elites.⁴⁵

⁴¹ Diana Spiekhou and Theo Spek, “Castle Landscapes and their Spheres of Influence: A Multidimensional and Diachronic Approach Illustrated by a Case Study of the Swamp Castles of Goor and Diepenheim (Eastern Netherlands) Between 1000 and 1450 AD,” *Château Gaillard* 28 (2018): 262.

⁴² Spiekhou and Spek, “Castle Landscapes and their Spheres of Influence,” 265.

⁴³ Piers Blaikie and Harold Brookfield, *Land Degradation and Society* (London: Methuen & Co. Ltd, 1987), 8.

⁴⁴ Anne Marie Overgaard, Living with Water in the Tøndermarsk and Gotteskoog,” in *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press), 2018, 142.

⁴⁵ Richard Hoffman, “Medieval Fishing,” in *Working with Water in Medieval Europe: Technology and Resource-Use*, ed. Paolo Squatriti (Boston: Brill, 2000), 340.

Yet for the WSC, the salt marshes and bogs were not just natural resources, but a source of new arable land.

Although the Netherlands have been the exemplar of human conflict with the sea, the coasts of Lower Saxony contained and controlled the sea to no less an extent.⁴⁶ The High Middle Ages saw a remarkable change in the environment of the WSC, with it being ringed – even defined – by a series of dikes that enabled the drainage of the wetlands and (in most cases) the ending of the tidal flooding of the coastal regions.⁴⁷ The WSC in this respect was one element of the creation of the *goldene Ring* (“golden ring”), the total encirclement of the North Sea Coast in an interlocked network of dikes.⁴⁸ This was an extension of clearance projects already underway in areas where flooding was less of a risk and peat bogs were more limited. Inland projects of clearance in northern Europe were comparatively simple, a process of expansion of clearance from already-defined settlements into woodland and scrub. Clearance stopped when the fields of neighboring communities met, expansion reached too marginal land, or it was halted to prevent loss of vital forest resources.⁴⁹ Sometimes, however, it did not stop, and poorly managed clearance destroyed western Jutland’s forest resources. Pollen analysis from the region suggests that forests had been on a fairly steady decline since the rise in settlement in the Bronze Age (clearance began in earnest in the long span between 2880 and 1510 BCE), but that expanding human settlement, in concert with the flooding along the coasts in the Late Middle Ages, nearly

⁴⁶ Uhlhorn and Schlesinger, *Gebhardt Handbuch der deutschen Geschichte: Band 13* (Stuttgart: Deutscher Taschenbuch Verlag, 1974), 32.

⁴⁷ Renes, “The Wadden Sea Region as a cultural Landscape,” 48-9.

⁴⁸ Bernd Rieken, “Die Friesen und das Meer,” in *Küstenmentalität und Klimawandel: Küstenwandel als kulturelle und soziale Herausforderung*, ed. Ludwig Fischer and Karsten Reise (Munich: oekom, 2011), 66-7.

⁴⁹ Robert Fossier, *The Axe and the Oath: Ordinary Life in the Middle Ages*, trans. Lydia G. Cochrane (Princeton: Princeton University Press, 2010), 183-4; David Nicholas, *Medieval Flanders* (New York: Longman Publishing, 1992), 259.

eliminated once-plentiful forests.⁵⁰ The earliest settlement of the coastal region began on sand ridges and higher ground, protecting communities against the ever-present threat of flooding. Although small rises and falls in sea level led to declines and increases in the amount of naturally available coastal arable and settleable land, it was never very large. The first steps in water management began at these loci of settlement, where sod and soil were steadily deposited to build up *terpen* over the course of generations. These *terpen* raised settlements above flood zones, allowing them to survive the worst storms and providing some limited arable and pasture land, from which drainage and clearance could advance into the lower-lying surroundings.⁵¹ Near the coasts, the approach had to be much different. Instead of facing forests and vegetation, water was the primary obstacle to agriculture. By cutting small ditches into the peat bogs beside local rivers, they could be drained, producing soil for pasturage or even agriculture.⁵² Settlement was promoted by offering favorable terms of tenure and grants to monastic institutions, of which perhaps the most famous, generous, and ultimately successful example was that of the Counts of Flanders at the opposite end of the Low Countries.⁵³ At a broader scale, such clearance was enabled by encouraging the movement of whole groups of people into new regions. Driven by the aforementioned incentives, farmers near the coasts expanded the bounds of arable land, enabling settlement further and further from the limited areas where land was already high enough to have drained soil.

Controlling water systems across the whole of the WSC may have generally protected communities from the majority of storms, but the removal of marshes also made the effects of

⁵⁰ Else Kolstrup, "Vegetational and environmental history during the Holocene in the Esbjerg Area, west Jutland, Denmark," *Vegetation History and Archaeobotany* 18 (2009): 351-2, 367-8.

⁵¹ Audrey M. Lambert, *The Making of the Dutch Landscape: an Historical Geography of the Netherlands* (London: Seminar Press LTD, 1971), 1-31, 60-80; see glossary entry on *terpen*.

⁵² TeBrake, "Hydraulic Engineering in the Netherlands during the Middle Ages," 107-10.

⁵³ Nicholas, *Medieval Flanders*, 22-3.

those storms all the worse when they breached the dikes.⁵⁴ The process of draining marshes and embankment, particularly studied in the peat bogs of the Netherlands, had very real impacts upon the landscape. Peat can be up to ninety percent water, and once drained the peat compresses accordingly. While the land immediately beside rivers was easiest to drain, as the peat compacted the land became increasingly endangered by this subsidence. Proximity to bodies of water, which once made drainage easy, now made land vulnerable to flooding. Farmers were forced to put in more and more effort to push drainage away from the rivers to keep up with declining soil levels. This was compounded by the tendency to burn the surface of freshly drained peat to concentrate nutrients for farming, as well as the increasing demand for peat as a fuel source. This demand only increased as the population grew and clearance removed the forests that once provided sufficient fuel.⁵⁵ Thus, as drainage progressed, the once-local concerns of subsidence developed into a regional problem, as large areas became increasingly vulnerable. In addition, heavy grazing denuded the coastal dunes that prevented stormwaters from reaching the interior, exposing it.⁵⁶ Rather than remaining static, the easy process of initial drainage and settlement led to subsidence and was followed by a need to construct extensive dikes by the start of the thirteenth century. Embanked areas remaining at largely the same level were grouped into *polders*, allowing for local coordination of drainage efforts.⁵⁷ The long-term consequences of drainage were perhaps displayed nowhere better than during the 1362 Grote Mandrenke. The

⁵⁴ Pavel Kabat, Jos Bazelmans, Jouke van Dijk, Peter M. J. Herman, Tim van Oijen, Morten Pejrup, Karsten Reise, Hessel Speelman, and Wim J. Wolff, "The Wadden Sea Region: Towards a science for sustainable development," *Ocean & Coastal Management* 68 (2012): 7.

⁵⁵ Nicholas, *Medieval Flanders*, 125-6; TeBrake, "Hydraulic Engineering in the Netherlands during the Middle Ages," 107-10.

⁵⁶ Alexander Lehouk, Nele Vanslembrouck, Vanessa Gelorini, Tim Soens, Erik Thoen, and Jelier A. J. Vervloet, "Reconstructing Disappeared Landscapes of Wet Areas: the Western Sealand Flanders," in *European Landscapes and Lifestyles: the Mediterranean and beyond*, ed. Alexander Lehouk (Lisboa: Edições Universitárias Lusófonas, 2007): 233.

⁵⁷ TeBrake, "Hydraulic Engineering in the Netherlands During the Middle Ages," 102-4, 115; see glossary entry on *polders*.

flood was incredibly destructive across the WSC, with villages near Ribe lost and 44 churches lost in Schleswig alone.⁵⁸ Floods breached the dikes in Lower Saxony to create the Dollart, Ley Bay, and Jade Bay.⁵⁹ Many of the *Hallingen, terpen* built on the small marsh islands, were lost, and some 30 parishes were simply swept away, including the community of Rungholt. Many such sites were never recovered.⁶⁰ As much as the destruction of these communities traumatized local societies physically, the emotional impact of these disasters, seen as a punishment for human corruption, was equally significant.⁶¹ The disaster demonstrated the need to invest in better dike construction and a more specialized workforce, often imported from other portions of the coast, and this process continued for centuries past the Middle Ages.⁶² This process of escalating costs of maintaining a land management system is known as “technological lock-in.”⁶³ Profiles of excavated dikes show a steady process of accretion, with several phases of expansion and reinforcement of dikes in the Middle Ages alone.⁶⁴ Responding to flooding by either abandoning inundated land or expanding upon existing dike systems therefore became a unifying theme for maintaining societies in the region.

While many sections of the medieval WSC were ultimately lost to settlement and agriculture, “The lost lands became fishing grounds and some of the lost settlements had an afterlife in folk tales and other types of collective memory.”⁶⁵ As traumatic as the loss of land

⁵⁸ Hybel and Poulsen, *The Danish Resources*, 47.

⁵⁹ Karl-Ernst Behre, “Coastal Development, Sea-level Change and Settlement History during the later Holocene in the Clay District of Lower Saxony (Niedersachsen), northern Germany,” *Quaternary International* 112 (2004): 37.

⁶⁰ H. Hadler, A. Vött, J. Newig, K. Emde, C. Finkler, P. Fischer, T. Willerhäuser, “Geoarchaeological evidence of marshland destruction in the area of Rungholt, present-day Wadden Sea around Hallig Südfall (North Frisia, Germany), by the Grote Mandrenke in 1362 AD,” *Quaternary International* 473 (2018): 38-9.

⁶¹ Kabat et. al., “The Wadden Sea Region,” 7.

⁶² Rieken, “Die Friesen und das Meer,” 67.

⁶³ Mark Elvin and Su Ninghu, “Man Against the Sea: Natural and Anthropogenic Factors in the Changing Morphology of Hargzhou Bay, circa 1000-1800,” *Environment and History* 1, no. 1 (February 1995): 44; TeBrake, “Hydraulic Engineering in the Netherlands during the Middle Ages,” 116-7.

⁶⁴ Kühn, *Die Anfänge des Deichbaus in Schleswig-Holstein*, 32-3.

⁶⁵ Renes, “The Wadden Sea Region as a cultural Landscape,” 51.

may have been, the permanent retreat from sites such as Rungholt represents little more than a re-assessment of the best use for that territory. As much as reclaimed land had value, in some contexts the cost of its maintenance made the exploitation of more “natural” landscapes a better return on investment (or rather, made the return on no investment preferable). This is also consistent with the change in population dynamics, as the growth that can be seen in the two centuries after 1100 was reversed through the fourteenth century, a trend furthered by – but existing independent from – the Black Death. Where floods occurred in prior centuries, the land was reclaimed, but in concert with the problems of subsidence and increased storminess, the decreased demand for land and the low availability of labor to repair and replace dikes may be factors in abandonment.⁶⁶ Yet for all those challenges, it is a testament to the endeavors of the WSC’s inhabitants that water management efforts became a core element of local identity, that of a people who fought – and sometimes won battles in – an endless war against the sea.⁶⁷ The people of the WSC therefore had a complicated relationship with their amphibious environment. Unaltered, it was a source of limited resources. Reclaimed and drained it could serve as the home to communities and a source of greater wealth, but the dangers of the seas and the challenges of controlling water were ever-present and demanded increasing levels of cooperation.

Approaches to Interacting with Nature

The WSC’s tidal zones, ranging from the Netherlands to Denmark, were a landscape quickly threatened by water under the best of conditions.⁶⁸ In addition to reshaping this

⁶⁶ B. H. Slicher van Bath, *The Agrarian History of Western Europe, A. D. 500-1850*, trans. Olive Ordish (London: Edward Arnold (Publishers) LTD, 1963) 89, 161-2.

⁶⁷ Pusen, *Niedersachsen*, 13; Pusen marks the earliest uses of phrases like “Gott schuf das Meer, der Friese die Küste!” (God made the sea, the Frisians the coast”)

⁶⁸ “Wadden Sea: Taking Shape,” Common Wadden Sea Secretariat, accessed November 10, 2019, <https://www.waddensea-worldheritage.org/taking-shape>.

landscape, those creating the interlinked dike systems along the North Sea also helped develop a modern view of nature as something to be controlled and ultimately exploited through their struggles with and successes in restraining the sea.⁶⁹ The people of the WSC's relationship with their environment thus invokes, and helped establish, the conceptions of "place" and "space" as described by Lawrence Buell, in which a "place" such as the WSC is a human landscape given boundaries and social relationships, while "space" is landscape without concrete definition or meaning. If "world history is a history of space becoming place,"⁷⁰ then surely bettering our understanding of this process requires studying records of the early stages of one of the greatest examples of such an effort.

In order to distinguish between human and natural environments, designations of "space" and "place," as well as the boundaries and relations between the two, need to be analyzed. Defining boundaries along the WSC was done at least as much through knowledge of the landscape and natural geography as it was through human construction of conceptual divisions. As noted earlier, the Danevirke served as a border between Denmark and the land beyond, both for defensive purposes and the conceptual boundaries of Denmark.⁷¹ Conceptually, dikes served a similar purpose, delineating human landscapes (be that anthropogenic or understood, mapped, and controlled territory) and natural landscapes with clear, effective boundaries.⁷² Like walls, they also served a defensive purpose, albeit defense against a force of nature instead of people. I

⁶⁹ Ludwig Fischer, "Victory over the sea: Dutch diking techniques in the seventeenth and eighteenth centuries and their impact on Europe's history of mentality," in *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press, 2018), 110.

⁷⁰ Lawrence Buell, *The Future of Environmental Criticism: Environmental Crisis and Literary Imagination* (Malden: Blackwell Publishing, 2005), 63.

⁷¹ Dobat, "Danevirke Revisited," 38-44.

⁷² Hans-Ulrich Rösner, "The Wadden Sea: A natural Landscape outside the Dikes," in *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press), 2018, 85-6.

will explore the usage of such boundaries, emphasizing their role in creating human environments of “place” as opposed to natural “spaces.” The very act of building dikes separated the cultural, or human, landscape contained within the dikes, and the natural landscape outside them.⁷³ The WSC was thereby redefined as one split between enclosed, controlled ecosystems and the more “wild” zones beyond the dikes. This region is fertile ground for study of its medieval inhabitants’ attempts to adapt to and control their environment, as well as their conceptions of the world. Such a study must recognize the multiple uses seen in both “wild” and “civilized” environments, but also the dangers perceived beyond the bounds of human control, especially in environments dominated by water. Paolo Squatriti notes that in early medieval Italy, water “was not only the element which ruled over all others, but was a resource upon which people relied heavily and which imbued their cultural values.”⁷⁴ This is no less true along the WSC. Containment and use of water defined the landscape, both physically and conceptually.

Chronicling the Wadden Sea and Critical Needs

The WSC was a region dominated by cities, powerful bishops, Danish kings, and Frisian counts. Despite variations in ownership and the process of rule, similar techniques and even people were employed to alter this contiguous region. Such lessons remain significant today, as the modern region remains divided, now across three nations. Hans Renes notes that “redefining the Wadden Sea region... as a cultural landscape is a necessary step towards the future management of the region.”⁷⁵ To do that, its history must be told not as a geographic zone; rather, its human history must be told, a history unified not by nation or even (as of the sixteenth

⁷³ Rösner, “The Wadden Sea: A natural landscape outside the dikes,” 2018, 85-6.

⁷⁴ Paolo Squatriti, *Water and Society in early medieval Italy* (Cambridge: Cambridge University Press, 1998), 9.

⁷⁵ Renes, “The Wadden Sea Region as a cultural Landscape,” 59.

century) by faith but by responses to the environment, a unity which reached further back than is usually assumed.

Much as the WSC itself is composed of similar, discrete components interacting to form a landscape, the human geography of the region can be seen in much the same terms. This project will seek to capture a portion of that variety. Narrative histories will be the first sources explored, and they will be analyzed based on their discussions of the landscape and its features. These narrative sources, the *Annales Stadenses* and the *Chronicon Werumensium*, provide insights into environmental use and attitudes in Lower Saxony and Friesland, respectively. Drawn from the western and the central portions of the WSC, these sources demonstrate a common usage of environmental language, but they also highlight particular aspects of the natural landscape each author considered significant. The approach to the northern end of the region will be somewhat different, making use of the *Avia Ripensis*, Denmark's oldest cartulary. The work's charters and records, including revenue lists for the Bishop of Ribe's holdings,⁷⁶ point to how the land and people were divided and quantified, and demonstrate them preparing for and grappling with ongoing changes. Collectively, these sources represent a cross section of the broad subdivisions of the WSC.

Due to the limitations of the project, this study is constrained to a select group of sources, which must cover the breadth of the region. This may come at the cost of depth, with only two historical narratives and one cartulary discussed. Conclusions are further limited by the types of available sources, created (or in the case of the *Avia Ripensis*, curated) by ecclesiastical hands, which undoubtedly colors the perception of nature and the human relationships to it seen in these texts. There is therefore plentiful opportunity to expand upon the work of this project.

⁷⁶ Hybel and Poulsen, *The Danish Resources c. 1000-1550*, 95-6.

Incorporating more documentary sources would increase the amount of concrete detail to be said about agricultural activity in the region. Additional narrative sources would allow us to hear more diverse voices coming from more points in the region than are presented here, and later narrative sources might address the emotional impact of the Late Middle Age's crises and abandonment. Even post-medieval records may carry the imprint of medieval activities and attitudes. Beyond written sources, archaeological work, particularly on the dike systems, may help support conclusions drawn from the texts. Further work could benefit from a comparative element, better distinguishing what elements of the human relationship with nature along the WSC stem from the specific local environment. This project is therefore the starting point for further exploration of textual evidence for land and water use in the WSC area.

Purpose

Through their implementation of drainage and embankment practices, the people of the medieval WSC found themselves forced into a form of "technological lock-in." This is a process by which the use of a system of technology becomes central to a people's lifeway, forcing the expansion of this system and its costs to keep it operational.⁷⁷ Along the WSC, drainage supported a growing population and created divisions between anthropogenic and natural areas, but floods forced the reinforcement of these systems of water management even as subsidence caused by drainage exacerbated the problem. Those who called the region home were left with little choice but to invest in ever-larger projects, both in scale and expense, else surrender the land so laboriously carved from the sea. While their measures continued to ensure the survival of

⁷⁷ Elvin and Ninghu, "Man Against the Sea," 44; TeBrake, "Hydraulic Engineering in the Netherlands during the Middle Ages," 116-7.

their farmland, it came at the cost of choice, as the same resources invested continually into maintenance could not be put to the effort to find other ways to manage their landscape.

Today, the WSC faces challenges that might have been familiar to residents of the medieval Waddenland, as the very actions that sustain modern society may demand increasing investment in mitigating its unintended consequences. The benefits of new development must be weighed against the potential consequences for ecosystems, as human actions threaten to drown the WSC once more. Anthropogenic Climate Change, driven by the fossil fuels our society depends upon to function, will cause sea level rises and may generate more storms such as those that breached the dikes in the 1362 Grote Mandrenke. Despite advances in climate modeling, some of these upcoming changes are currently as unpredictable as those experienced by the inhabitants of the WSC at the end of the thirteenth century.⁷⁸ Such climate change will certainly upset the status quo and lead to debates over whether naturally formed or manmade environments in the region should be given preference for conservation and expansion.⁷⁹

The WSC still lacks a local, independent political force to face these challenges, but thankfully the three modern nations holding the whole of the Waddenland recognize the necessity of cooperation to manage this ecosystem.⁸⁰ Such an effort demands a thorough understanding of how the WSC came to be as it is, including its natural environment, the anthropogenic changes made to it, and the attitudes of the people who live and have lived there. As a pivotal period in the region's history, it is imperative to understand how the medieval landscape was divided between natural and human environments, as well as to interrogate past

⁷⁸ Kabat et. al., "The Wadden Sea Region," 10; *Küstenmentalität und Klimawandel: Küstenwandel als kulturelle und soziale Herausforderung*, ed. Ludwig Fischer and Karsten Reise (Munich: oekom, 2011), 18.

⁷⁹ *Küstenmentalität und Klimawandel: Küstenwandel als kulturelle und soziale Herausforderung*, ed. Ludwig Fischer and Karsten Reise (Munich: oekom, 2011), 18.

⁸⁰ "Trilateral Wadden Sea Cooperation," Common Wadden Sea Secretariat, accessed October 7, 2020, <https://www.waddensea-worldheritage.org/trilateral-wadden-sea-cooperation>.

assumptions about the environment. Above all else, the experience of the inhabitants of the medieval WSC can serve as a lesson for us, both through their successes in changing their environment, and their failures to address the consequences of their actions. If we are to prepare for the Wadden Sea Coast's future, we must better understand its past.

CHAPTER II

CONTACT BETWEEN NATURAL AND HUMAN ENVIRONMENTS
IN THE *ANNALES STADENSES*

Albert von Stade was a Franciscan chronicler of the 13th century. Although he began as a Benedictine monk, taking up the abbacy of the Benedictine monastery of Stade in 1232, his failure to change their guiding rule to that of the Cistercian order led him to leave, joining the Franciscans in 1240. It is at this point that he began to write his account, the *Annales Stadenses*, which stretched from Creation to 1256. A continuation brought the *Annales* up to 1265, which he may also be responsible for. The complete work includes a catalogue of popes through Urban IV (whose term of office was 1261-4) and a guide for a journey to and from Rome. The only surviving manuscript was printed in Helmstadt in 1587.⁸¹ Since then, the sole edited edition of the text was published in the *Monumenta Germaniae Historica*.⁸²

Sitting near the mouth of the Elbe, Stade sits at the intersection of Schleswig-Holstein and Saxony, and of the North Sea and Germany. Albert von Stade's *Annales* therefore presents a history of the Wadden Sea Coast and its environs through its accounts, as well as offering some enticing information on travel and geography in its description of a journey to Rome. Using this work provides a model for analyzing the use of landscape in historical narratives in the region and the language employed to discuss natural forces in, human alterations to, and uses of the environment. It also demonstrates the limits of these perspectives, as aspects of the environment

⁸¹ Heinrich Joseph Wetzer, Benedict Welte, Hermann Joseph Kamp, and Melchior Abfalter, *Wetzer und Welte's Kirchenlexikon: oder Encyclopädie der katholischen theologie und ihrer hilfswissenschaften* (Freiburg im Breisgau: Herder, 1903), 425-6.

⁸² Albert von Stade, *Annales Stadenses*, MGH SS16: 271-370.

that Albert sees as irrelevant to the broader political and ecclesiastical concerns of Stade were passed over.

Riverine and wetland environments were perceived as homes of danger, be it natural or human, “spaces” into which the civilized entered at their peril. Yet these environments are also ones that good rulers sought to conquer and thereby convert into “places.” Construction of new physical environments is also associated with conceptual changes in the environment.

Agricultural metaphors are used when describing the creation of new ecclesiastical communities, equating the action to the transplanting of a garden. Dramatic natural events such as floods and famines only entered the *Annales Stadenses* as they had an impact on human lives, but Albert ascribes them natural, not supernatural, causes. Despite the danger, the wilderness environments often seen as hostile were potentially valuable to the skilled, and like human environments they served many needs.

The Palus and the Fluvius

Albert von Stade uses terminology to describe the natural environment sparingly, but not unconsciously. In particular, the aquatic environments of wetlands and rivers feature as wild, dangerous areas. The term *palus*, meaning marsh, fen, or bog,⁸³ is used only twice in the text, with its adjectival form, *paludosus*, being only used twice as well. When employed, Albert uses it to describe environments that impede or block travel, even to the point of being deadly.

The first use of the term *palus* in the *Annales* comes in the entry for the year 797, during the reign of Charlemagne. Its use emphasizes the challenge posed by his campaign against Saxony:

⁸³ “Palus,” Logeion, accessed June 18, 2019, <https://logeion.uchicago.edu/palus>; see glossary for a note on translation.

Karolus expeditionem movit in Saxoniam ultra omnes paludes ad Oceanum usque in Hadoloha, quod nunc urbanus dicitur Hatheleria, ibi enim Oceanus Saxoniam alluit.⁸⁴

Charles undertook an expedition against Saxony across all the wetlands to the Ocean even to Hadoloha, whose city is now called Hadeln,⁸⁵ where the ocean washes Saxony.

Charlemagne's campaign forces the conversion of Saxony, and as the campaign reaches to Hadeln on the coasts of Lower Saxony, it is thus the true start of the Christian culture to which Stade belonged. The short description of the land Charlemagne conquered paints a picture of what he faced. The land he crosses is not fertile farmland or pastures, but *paludes*, the inhospitable environment of fens, marshes, and bogs. It is made all the stranger through the description of Saxony, an environment dominated and often overrun by the sea. While wetland may be an accurate description of the landscape, and the idea of the ocean "washing" the coast a reflection of the WSC's tidal zones, it is notable that this point is made to describe the landscape primarily as it stands in the way of Charlemagne. It thus represents an obstacle that elevates Charlemagne's deeds through the challenge he overcomes. It also suggests that the taming of this environment is inherently linked to the process of Christianization, as any clearance continues Charlemagne's campaign to bring Christian civilization to the coasts. To cross the *paludes* is to map it, to establish knowledge about its paths and its hazards, to reduce it from a trackless "space" to a conquered "place."

Yet even as such environments are conquered, settled, and mapped, they still hold dangers. Venturing into the wetland could carry a deadly price, a fact discovered by the bishop of Utrecht in 1228:

⁸⁴ Albert von Stade, *Annales Stadenses*, 309.

⁸⁵ "Orbis Latinus online," digitization of Graesse (1909), accessed September 6, 2020, <http://www.columbia.edu/acis/ets/Graesse/contents.html>; for location, see figure 1.

Otto Traiectensis episcopus versus Threntam ante Colfelde Frisonum insolentiam compressurus, in paludoso loco a rusticis die Pantaleonis feria quarta occiditur. Ibidem comes Gelriae vulneratur, et plurimi circa 200 omnes milites aut filii militum perimuntur.⁸⁶

Otto, bishop of Utrecht, facing Drenthe before Colfelde for the restraint of insolent Frisia, was killed in a marshy place by peasants on the fourth festival day of Pantaleon. At the same place the count of Gelre was wounded, and very many, around 200, knights and sons of knights were all killed.

Here the *palus* (or rather, the *paludosus locus*) is an actively dangerous place, where a man of God is killed. Albert further emphasizes that it is not merely a wetland, but a location where *rustici* dwell. The physical landscape's wild nature is therefore reflected by the people who populate it. Connecting the nature of people to the land they inhabit is nothing new – authors have done so at least as far back as Herodotus.⁸⁷ The passage also makes the implicit connection that these people die because they venture out from their civilized and properly Christianized city environment into the dangerous wilderness. It illustrates how the definition of a “place,” a mapped, defined, and understood environment, differs from person to person. The *Annales* also provides an explanation for why Frisia is *insolentia*: as a marshy and wild place filled with *rustici*, how could it be anything else? The people of Frisia reflect the region they inhabit – hostile, irrepressible, and wild.

The final two uses of wetland terminology come during Albert's description of a journey to Rome. Albert describes one stretch of this journey as such:

Inde 9 per modicam aquam, ex utroque latere omnino paludosam.... Haec aqua, quamvis sit modica, tempore tempestatis valde est periculosa, quia a nullo latere refugium est, obstantibus paludibus et deserto.⁸⁸

⁸⁶ Albert von Stade, *Annales Stadenses*, 359.

⁸⁷ Patrick J. Geary, *The Myth of Nations: The Medieval Origins of Europe* (Princeton: Princeton University Press, 2002), 45-6.

⁸⁸ Albert von Stade, *Annales Stadenses*, 338.

Then 9 [leagues] through calm water, marshy on both sides the whole distance.... This water, as much as it may be calm, is in the time of a storm very dangerous, because there is a refuge from neither side, with wetlands and wasteland standing in the way.

Albert's first description of the environment implies a placid, safe environment, yet his description of a wetland on both sides creates the impression of a waterway hemmed in by wilderness. Rather than serving to create boundaries and define the river as a "place," instead these wetlands further the environment's status as a "space." He reinforces this by describing how the nature of the environment changes rapidly, as the surrounding wetlands are a hidden danger exposed by means of another natural effect – a storm. It is the generally calm water alone that keeps those who travel on it from running afoul of the wetlands. As such, the river is also an element of the dangerous nature of this area, if only because the deceptively smooth waters help hide the danger. Unlike the previous descriptions, here Albert specifies that the area is *desertus*, devoid of even *rustici*. However, with natural forces the main danger in the area, the lack of people only adds to the dangers this wilderness poses, making it somewhere with no safe harbor.

Like wetlands, rivers can also serve as dangerous locations in their own right. Albert's record of 1165 and an attempt on the emperor's life demonstrates this:

Imperator Laudam destruxit, et aliam aedificavit super fluvium Athera. Ubi dum imperator hiemaret, et quodam mane super fluvium deambulet solo comite, cui nomen Tidericus Friso, quidam vir fortis, stricta indutus camisia, cera et pice linita, prosiliit de latebris, et a tergo imperatorem rapiens et secum in arenam provolvens, in profundum fluminis trahere nitebatur. Illo trahente, imperatore renitente, Thidericus evaginato gladio latronem fugavit.⁸⁹

The emperor destroyed Lodi,⁹⁰ and built another [city] above the river Athera. While the emperor overwintered there, on a certain

⁸⁹ Albert von Stade, *Annales Stadenses*, 345.

⁹⁰ Albert von Stade, *Die Chronik des Albert von Stade*, trans. Franz Wachter (Leipzig: Dyksche Buchhandlung, 1890), 30; city identified as Lodi by the German translation of the *Annales*.

morning he took a walk above the river with only a count by the name of Tidericus Friso, and a certain brave man, having put on tight garments, lined with wax and pitch, leapt up from a hiding place and, seizing the emperor from behind and overturning him with himself into the sand, sought to drag him into the depths of the river. With that one dragging and the emperor resisting, Tidericus drove off the robber with an unsheathed sword.

Like the *palus*, the *fluvius* serves as a place just outside the control of civilization. It is home to unsavory sorts who do not recognize nobility, even that of the emperor himself. The unnamed robber even tries to drag the emperor deeper into this hostile environment, attempting to move the conflict from the *arena* into the *profundum fluminis*. Venturing there unprepared nearly becomes disastrous, despite the emperor's previous efforts to pacify the region. The destruction and re-founding of Lodi serves to establish the emperor's authority over the region, destroying uncontrolled urban spaces and replacing them with those under his auspices, although perhaps this action was reason enough for the assassination attempt. Lodi's proximity to the Athera river makes the emperor's foundation an act calculated both to put the community near a supply of fresh water and also to civilize the wild environment of the river, a defined point upon a winding, uncontrollable facet of nature. The attempted assassination shows that such measures were not without controversy, yet it also served to justify the need to bring this area under control.

The wetlands of Frisia, Saxony, and Italy are mentioned only when reinforcing an impression of a hostile and untamed wilderness benefits the narrative. They suggest not only the natural character of the region, but the human character as well. A *palus* is not only a noun evocative of a certain environment, but one that tells us about the human presence in the area – the environment either contains the hostile sort of people who exacerbate the dangers of the wetland, or is so empty there can be no safety if danger strikes. This property is shared by the rivers in Albert's narrative, which are presented as similar aquatic environments where security

and stability cannot be certain. Rather than serving as simple boundaries between areas, rivers and wetlands are “spaces” in their own right, environments through which people must travel and, in so doing, contend with the hazards within.

Founding and Building

Within the *Annales Stadenses*, the map of the human presence on the landscape is by no means static. Albert discusses two notable forms of anthropogenic landscape change: fortification and monastic settlement. When describing the foundation of new religious houses, Albert uses agricultural terminology evocative of their origins as offshoots of parent houses. This allows him to express the continuity between religious houses, and through them, intellectual and moral authority. The construction of fortifications also modifies the physical landscape, but Albert shows how in such cases redefining boundaries can promote independence in cities and people. Throughout his narrative, he must account for a changing landscape, and Albert’s descriptions shed light on how these changes forge new relationships between people, institutions, and the environment.

Fortifications can serve not only as defensive barriers but as markers of identity and division, but Albert goes further by suggesting that boundaries are tied to rebellion. The year 1166 sees a duke’s rebelliousness emerge in the same passage as construction in Braunschweig is described:⁹¹

Heinricus dux super basem leonis effigiem erexit et urbem fossa et vallo circumdedit. Et quia potens et dives erat, contra imperium se erexit, unde imperator eum humiliare proposuit, et ex hoc multae surrexerunt contentiones principum contra ducem.⁹²

⁹¹ Albert von Stade, *Die Chronik*, 31; city identified as Braunschweig by Wachter.

⁹² Albert von Stade, *Annales Stadenses*, 345.

Duke Henry erected a statue of a lion upon a base and surrounded the city with a ditch and a wall. But because he was powerful and rich, he lifted himself against the empire, due to which the emperor plotted to humiliate him, and from this many struggles of the nobles began against the duke.

The combination of the wall rising from the landscape, and the ditch cutting into it, divide the landscape into a discrete interior “place” and an exterior “space.” This goes beyond the simple defensive potential of a wall. Walls conceptually separate spaces, and a defended city wall physically isolates it from the surrounding region, controlling access to and from it. This is much akin to the Danevirke’s role as a boundary between Denmark and northern Germany, albeit here the division is between an urban area and its surrounds.⁹³ The significance of the division between city and hinterland was seen in the account of the Bishop of Utrecht’s death in 1228 – the boundary between the urban domain and the hinterland kept him safe, and leaving it was deadly. As much as the hinterland may be dangerous, this construction creates that division between the two areas as much as it defends those within the city. At Lodi, the 1165 urban foundation established control over the hinterland through the creation of “place,” but in this project at Braunschweig, it divides the city from the hinterland. These fortifications serve to destabilize the region. Immediately following this, Duke Henry becomes disloyal to the emperor. His motion to be disloyal is the same term – *erexit* – used to describe his construction of the lion statue, the first phase of his fortification of the city. Henry’s rebellious attitude is connected to his building of fortifications, which turned his wealth into military power. Just as he is exerting his own independence as a result of his power, the city can exert independence through its own newfound strength; conversely, just as the walls and ditch separate the city from the landscape, so too is the duke separated from his peers.

⁹³ Dobat, “Danevirke Revisited,” 38-44.

While raising fortifications may describe a process of separation, terminology of planting is used perhaps most dramatically to describe the connections inherent in the establishment of new monastic houses. In 1136, Duke Henry of Saxony:

Quem etiam secum assumens profectus est - seminarium
novelle plantationis in Sclavia.⁹⁴

Also, taking up [the dukedom] he increased it – a seminary of a
new planting in Sclavia.

Henry's improvement of his dukedom is connected to the construction of new religious structures – good stewardship demonstrated through actions of construction. Yet this project is not devoid of inherited tradition. Albert takes the metaphor of a *seminarium* as a nursery or a seed-plot and uses it to detail the process of its establishment. A new seminary (in both the physical and theological sense) is not built from the ground up, but grown from the knowledge, practices, and presumably people of past monastic houses. The expansion and spread of German authority into Eastern Europe is almost described as a transplant from Henry's realm, an evocative description of colonization. In doing so, Albert suggests that Henry's effort to better the realm is a mix of agricultural and institutional growth. Albert applies this language to new constructions again in 1142, this time in the area of Stade itself:

Indictione quinta suscitavit Deus spiritum trium fratrum, Dudonis,
Adekonis et Richberti, ut novellam plantationem in suburbio
Stadensi erigerent, capellam ibi ligneam construentes.⁹⁵

In the fifth year God elevated the spirit of three brothers, Dudo,
Adeko, and Richbert, so that they erected a new planting in a
suburb of Stade, constructing a wood chapel there.

Albert describes this new construction once more as a *plantatio*, echoing the agricultural language used in the account of 1136. Here, he provides the details of the new religious house –

⁹⁴ Albert von Stade, *Annales Stadenses*, 323.

⁹⁵ Albert von Stade, *Annales Stadenses*, 324.

one established by a group of monks and constructed on the outskirts of Stade. The idea of established monks moving to a new site and establishing a new center of worship, along with the agricultural metaphor for the site, again suggests that we should see these events as more of a transplant, where existing plants are taken to a new site. Establishing a house away from the monastery within the city proper would be in keeping with the monastic drive to establish themselves in wilderness or in locales where they could be more isolated from others. The simplicity of a wood chapel also reflects the purity of the new house, and further evokes an image of transplanting an old tree to somewhere where it can grow freely. It comes at an auspicious moment; they have set out from their former home for a new calling around the same time as Albert himself. It further helps justify this move, as this theme of continuity ensures the monks are not guilty of violating their vows of stability in their pursuit of a better spiritual environment. A good new construction therefore represents both the establishment of something new and a respect for the knowledge and skills of the old that should be spread and allowed to flourish.

Through use of an agricultural metaphor of transplantation, Albert von Stade explains how new monastic houses are created from the old, making for fresh new creations that do not lose the history or value of the original house. The *Annales* further suggests that just as a seminary educates new clergy through established tradition, construction of the very houses of such education represent the application of old knowledge to new locations. He also uses the similarities in his language of construction and insurrection to demonstrate the connections between the physical separation of a city from its surrounds and the separation of a rebellious duke from loyal peers. This reflects his belief in the power of creating new boundaries, for good

or for ill. In explaining a changing political and institutional landscape, Albert describes concurrent changes in the physical landscape to construct his narrative.

Calamity

In addition to the political events captured in Albert von Stade's account, natural disasters periodically find a place in his text. Despite living on the shores of the Elbe, flooding in the form of an *inundatio* has a small place in the *Annales*, and its descriptions suggest floods occur less as a form of divine punishment than as a simple fact of life. Despite being more closely tied to human suffering, famines are noted rarely, either being a footnote to the year's events or a message on ecclesiastical disunity.

Despite their potential devastating effects, floods are relegated to the role of brief, incidental natural effects and travel hazards. In the brief entry for 1097, immediately following the description of Pope Urban II's call to the First Crusade, a flood strikes:

Heinricus imperator ab Italia rediens – et fluminum inundationes increverunt.⁹⁶

Emperor Henry returns from Italy – and the floods of the rivers grew.

Albert avoids offering any explanation for this flood. No divine cause is implied, nor is the event associated with descriptions of human activity that would incur some form of punishment.

Instead, the flood's description serves only to fill out a description of a year otherwise devoid of much human activity worthy of mention. The closest a flood comes to being ascribed supernatural cause is the 1248 flood, which is described pointedly at the end of a troubled year:

Istos hereticos fovit et defendit Conradus, filus Friderici imperatoris quondam... liberi et ministeriales a Conrado

⁹⁶ Albert von Stade, *Annales Stadenses*, 317.

recesserunt... Maxima inundatio aquarum nocte puerorum, et in utroque litore Albiae plurima submersio hominum.⁹⁷

Conrad, son of the former emperor Frederick, protected and defended those heretics... the freemen and officers withdrew from Conrad... There was the greatest flood of waters on the Feast of the Holy Innocents, and a very large drowning of men along both banks of the Elbe.

The more extensive treatment is likely tied to the flood's occurrence during Albert's lifetime, as well as its proximity to Stade; the 1097 flood, which lacks a description of place or impact, may not be well attested to by previous records in Stade. Albert echoes the language used to describe wetlands bounding a river ("ex utroque latere omnino paludosam") during this flood. Yet rather than the river being dangerous because it is hemmed in, the Elbe becomes dangerous because it escapes all its boundaries. Floods are conditions where, even if produced through entirely natural means, natural forces have exceeded the normal limits and boundaries they operate within, to the detriment of those living in that environment. It also threatens the stability of "places," as they are quite literally made more fluid as water fills them. A flood is worthy of note precisely because the flood is not a constrained incident, and threatens the foundations of human society.

While the flood's impact is clearly severe, Albert's description is limited to the cost in lives. No mention of property damage caused by the flood is made. On one hand this could be simply due to it falling during the winter, when only the few crops left in the ground (e.g., winter wheat) might be lost. More generally, this suggests that either property damage was seen more as a cost of doing business, the potential for loss inherent in living near a river, or that little was lost by those whom Albert might have considered worthy of mention. Gregory Aldrete's work on flooding in Ancient Rome notes that Rome's topography provided safe havens in case of flooding, but further notes that the wealthy tended to build housing above the reach of the

⁹⁷ Albert von Stade, *Annales Stadenses*, 372.

majority of floods.⁹⁸ If this pattern is present in the layout of medieval Stade, Albert may exclude mention of damage because sites of note – churches, monasteries, and the homes of the nobility – were in fact safe from the flooding. In such a case, only a great loss of life made the event noteworthy. One other reason for its inclusion would be as an instance of divine punishment for recent events. The flood does come on the heels of a year where the emperor's son takes sides against proper Catholics, and his subordinates do not accept his authority. Yet once again, Albert includes the two events as separate, providing no bridge between the natural and political events. Floods are purely natural disasters, pertinent only in how they impact human lives.

The *Annales* presents a different use of the term *inundatio* during the description of a journey to Rome. In an aside to discuss the terrain of the rivers and valleys of Italy, Albert discusses the nature of storms and rainbows:

Hoc plurimi ignorantes dicunt: Pluvius arcus id est Yris, sed falluntur; est enim ille fluvius, et dicitur pluvius a pluvia, quia tempore pluviali maxima inundatione labitur, et multa profunditate impedit viatores.⁹⁹

Many, being mistaken, say this: the rainbow is Iris, but they are deceived: for it is a river, and is said to be a rain from the rain, because it falls in a rainy time with the greatest flooding, and hinders travelers with its great vastness.

Here, flooding is reduced to a nuisance, quite literally an impediment. Albert appears largely unconcerned by the impact of flooding beyond the danger to a traveler's rapid and secure journey to Rome. Here, Albert not only avoids supernatural explanations but actively attempts to resist age-old connections of natural forces to Iris. As a final note regarding discussions of flooding, as a narrative that reaches back to Creation, the *Annales* includes the Great Flood.

⁹⁸ Gregory S. Aldrete, *Floods of the Tiber in ancient Rome* (Baltimore: Johns Hopkins University Press, 2007), 233-5.

⁹⁹ Albert von Stade, *Annales Stadenses*, 337.

Albert distinguishes between that flood and conventional ones through the very terms used to describe it – quite unlike more mundane *inundationes*, the Great Flood is a *diluvium*.¹⁰⁰ This only furthers a distinction between floods as natural forces and those brought about as divine punishment.

In contrast to floods, famines are far more regularly discussed in the *Annales*, although they are only once tied explicitly to a human cause. The first famine is a direct result of the disunity in the Catholic church under Pope Alexander III:

Alexander III. - maxima fuit fames et maximum scisma per 20 annos, tribus contra eum electis, uno post alium.¹⁰¹

Alexander III. – there was the greatest famine and the greatest schism through 20 years, with three having been elected against him, one after another.

Alexander III's time in office is characterized as a troubled time, but these troubles are not limited to ecclesiastical matters. Instead, a schism in the Church and three elections of antipopes are connected to natural disaster. Yet the disaster is left vague; where the disaster occurs and its effects are not specified. Instead, the *fames* is a tool used to increase the impact of a papal schism in the text's account, reflecting Albert's own discomfort, as part of the Church himself, with such a threat to papal authority. With the exception of a quote from Hildegard von Bingen, further famines are described as short, discrete events. Their descriptions are insufficient to explore their cause, natural or divine.¹⁰² However, two famines receive special, if similar, treatment, the first of them coming in 899:

Magna fames homines se invicem comedere coegit.¹⁰³

A great famine drove men to devour themselves in turn.

¹⁰⁰ Albert von Stade, *Annales Stadenses*, 283, 284, 286.

¹⁰¹ Albert von Stade, *Annales Stadenses*, 299.

¹⁰² Albert von Stade, *Annales Stadenses*, 312, 313, 315, 331.

¹⁰³ Albert von Stade, *Annales Stadenses*, 310.

Once more, Albert provides little extra information, only the exciting detail of cannibalism. He offers no explanation for why this famine was so severe, nor does he present his source of evidence (or distance himself from the reports) or even detail where the famine struck. Lest this be seen as only a recorded tale from the past, Albert uses the same language to describe the events of 1233:

Fames validissima in Livonia, ita ut homines se invicem comederent.¹⁰⁴

There was the most powerful famine in Livonia, so that men devoured themselves in turn.

The famine in Livonia is not connected to the other events of the year, and the only possible reason for a famine to strike Livonia is its recent issues with pagans.¹⁰⁵ The association of a famine with contemporary pagan activity reduces the perception that cannibalism was the act of Christians, even desperate ones. Like Albert's descriptions of past floods, the famine which falls within his lifetime receives a greater deal of specificity.

Ultimately, neither flood nor famine holds pride of place in Albert's narrative. Famine is used once to further a message of the costs of papal schism, but like most other descriptions of such famine it is vague both with regard to who it affected or how it played out. Floods are described as incidental events, noted solely for their scale or for the problems they pose for travelers. They are events where water behaves in a manner counter to human interests and its normal behavior. Only the most remarkable events and damaging natural disasters surface in the *Annales*, and few instances are attributed to any greater cause. Even the barest details of disasters

¹⁰⁴ Albert von Stade, *Annales Stadenses*, 361.

¹⁰⁵ Albert von Stade, *Annales Stadenses*, 360, 361; "subito paganorum irruptione."

appear to be lost within a short span of time, with Albert recounting only the year of a flood or famine and on rare occasions the macabre details.

The Miraculous

While calamities are given little to no divine explanation, Albert's narrative is not devoid of the supernatural. Two of the exceptional events described in his account directly involve the use of the landscape. Each has value in evaluating how Albert chooses to record events that might stretch credibility through his use of himself as a witness. The miracle tales also provide tantalizing detail about land use and water infrastructure in the vicinity of Stade. Each tale shows how individuals engaged with the multiple uses of natural and anthropogenic landscapes.

Albert records a supernatural event for the year 1202 which depends upon the exploitation of the natural environment. Following a brief description of the year's deaths, successions, and conflicts, Albert turns to relating a story from that year:

Eodem anno feria 5. paschae duo viri prope Stadium iuxta villam Herthorpe... cespites fodere abeuntes, cibaria sua secum detulerunt cum cuneo butiri, quod in die paschae fuerat consecratum. Senior vocabatur Redwinus, iunior Ethelerus, ambo adhuc superstites, scilicet anno Domini 1240. Dum fodiendo cespites laborarent, audierunt circa vicinum fere rubum strepitum cornicum et garrum voluchrum aliarum; et putantes, ibi iacere vulpem aut leporem a venatoribus, qui locum illum frequentare solent, forte perditum aut relictum nescientes, illuc velociter abierunt et, cum redissent spe sua frustrati, butirum, quod reliquerant, minime repererunt. Confabulantur inter se, quonam devenisset... iterum aggressi sunt laborem fodiendi. Et cum foderent, butirum in integra terra ulterius quam ad unius pedis spissitudinem invenerunt, Ethelero illud, cum cespitem foderet, suo fossorio dividente. Ethelerus comedit, Redwinus hoc comedere non audebat.¹⁰⁶

In this year on the fifth holy day of Easter two men near Stade, close to the Herthorpe estate... going out to dig sod, they took their food with a wedge of butter, which had been consecrated on Easter

¹⁰⁶ Albert von Stade, *Annales Stadenses*, 354.

day. The elder was called Redwin, the junior Etherlerus, both still living, you may be sure, in the year of the Lord 1240. While they labored at the sod with digging, they heard around the nearby brush a call, a crow and the din of other winged ones: and thinking that a fox or hare, by chance injured or devoid of sense, fled from hunters, who frequented that place, they went away to there very swiftly and, when they returned with their hope frustrated, they were unable to find the butter, which they left behind. They conversed among themselves as to where it had gone... again they approached their labor of digging. And when they dug, they came upon thick butter in untouched earth deeper than one foot, with that Ethelerus splitting it with his spade as he dug sod. Ethelerus ate it, Redwin did not dare to eat it.

These two men remain within the proximity of Stade, but venture beyond its bounds to gather sod. That the Herthorpe estate is mentioned as where they are near (but not on) suggests there is a specific location associated with the estate to which people go to cut sod. This description might be sufficient for readers to identify the precise location, or at the very least define a plausible area where sod extraction might occur. The purpose of the *cespites* is also unclear – it might be sod meant for earthworks or, given Stade’s location in a region with plentiful peat bogs, refer to peat extraction as a fuel source. That they have moved outside the bounds of Stade is emphasized by the distraction that draws them away. Their expedition represents an effort to take advantage of another opportunity the wild may have thrown their way, itself a result of another use of the area. It also reflects the wide array of uses the woods possessed, from fuel or building materials to food. Despite the threats wild environments can pose elsewhere in the narrative, for Ethelerus and Redwin it is a source of plenty, and the rustling of bushes promises not danger, but opportunity. Although their hunt fails, they ultimately encounter a much less likely resource in the wilderness.

Upon returning to their work, they find that their butter has disappeared. The disappearance of the butter is not random – it is, presumably unlike their other possessions,

consecrated. In keeping with its already-supernatural property, it is the object of the miraculous events that occur. The butter, a product of diligent labor, disappears as a result of their lack of diligence at cutting sod. When they actually resume digging, the butter returns, or rather is replaced by newly discovered butter under the earth, an event that has no explanation, especially given that the soil it is in had been undisturbed. That the soil in which the butter is miraculously found is *integra* has significance beyond clarifying the strange nature of what has occurred. By digging into fresh earth they are, quite literally, delving into the unknown. Even in this environment known to these two individuals, their knowledge is only partial and can therefore not entirely remove the mysterious qualities of a “space” it possesses. Their discovery lends credence to interpreting the *cespites* as peat, as digging into peat bogs has occasionally resulted in unexpected discoveries like the bog bodies; butter might not have sounded like the strangest thing that could be found in such a place. Indeed, the occasional discovery in recent history of dairy products like butter hidden or perhaps stored in bogs – generally referred to as “bog butter” – may make the explanation for this event remarkably mundane.¹⁰⁷ The supernatural disappearance and reappearance of butter reflects the strange place into which Redwin and Ethelerus have ventured. Although Albert provides no mechanism through which the butter found its way below the ground (nor does he specify if the butter these two discovered was the same as that which they had lost), he does offer an aside as to the reality of these events. By specifying that these two were still alive when he began his work, Albert affirms that the story comes directly from those who witnessed it, and tacitly stands by the eyewitness testimony of the two individuals who, in the course of daily activities, encountered something extraordinary.

¹⁰⁷ Coraline Earwood, “Bog Butter: A Two Thousand Year History,” *The Journal of Irish Archaeology* 8 (1997): 25.

Among the other miraculous events described in the *Annales*, another involves a quite different part of land management and production, interrelating the role of fishing and mills. The story begins in 1245 with the introduction of a man named Geverhardus:

Praepositus de Buchestehude Olricus quendam servum habuit Geverhardum, qui quotiens voluit gurgitem aquae Eschede ita, quod non videretur, intravit; et post longam horam rediens magnos pisces, fere ad instar trium palmarum, in qualibet manu unum et in ore tertium retulit secum. Et saepe de balneo exiens in aquam prosiliit et in stupam pisces domino reportavit. Vigilia apostolorum Petri et Pauli, praesente praeposito, vidi, quod inter rotas molendini in profundum aquae se dimisit, et diu post cum pisce non modico rediit.¹⁰⁸

Olricus, the prefect from Buchestehude, had a certain servant named Geverhardus, who often as he wished, entered the eddies of the Eschede water, so far that he could not be seen; and returning after a long hour he brought back with him great fish, approximately to the value of three hands, one in each hand and a third in his mouth. And often leaving from the bath he leapt into the water and brought back into the house fish for his master. On the vigil of the apostles Peter and Paul, with the prefect present, I saw that he sent himself out into the depths of the water between the wheels of the mill, and after a long time he returned with a not modest fish.

Albert describes this individual's remarkable abilities, but further specifies what portion of Gerverhardus' abilities he himself saw. Even more so than the butter miracle, he clarifies his own role as a witness. Albert also notes that Geverhardus demonstrates his abilities on a religiously significant day, "during the vigil of the apostles Peter and Paul;" similarly, Redwin and Ethelerus' butter miracle occurred on the fifth day of Easter, another holy day. Just as the story of Redwin and Ethelerus demonstrates the multiple roles of a natural area for resource extraction (with their sod-cutting mission derailed by the possibility of game), here Albert discusses water as powering mills and providing fish, roles that occur in the same locations.

¹⁰⁸ Albert von Stade, *Annales Stadenses*, 369.

Although Albert's description of the mill is brief, it at the very least indicates the existence of multiple (given the use of *inter*, perhaps two) mill wheels, either bipartite mill wheels or separate wheels to handle a high volume of grain. The use of *gurges* in the general description of Geverhardus' abilities suggests water with an active flow, yet the instance Albert describes uses the term *profundus*, perhaps suggesting he is diving down into the mill pond. For all the emphasis on Geverhardus' abilities, the *gurges* may simply refer to a weir, a part of the mill complex already expected to gather fish for human consumption.¹⁰⁹ The infrastructure of a mill thus serves two functions, a space with a primary role (grinding flour) built either with a mind to enable secondary roles (fishing) or with the understanding that such secondary activities may take place there. Just as with natural environments, medieval manmade landscapes should be seen as multi-use spaces, not constrained to a single product or industry.

In both of these miraculous events, Albert shies away from interpreting the cause, mechanics, or meaning of these stories. Although they are described as occurring on religious holidays, neither event is given explicit support by any force. From the seeking of sod and game to the significance of mills and mill ponds, elements of daily lifeways are revealed. In both cases, areas used, even designed, for one purpose have alternate uses and resources that can be extracted. Their value must be measured not in the output of one product, but in the sum of uses the environment may offer. Although the events he describes are anything but ordinary, their intersections with ordinary people and their lives can still be revealing.

Conclusion

In writing the *Annales Stadenses*, Albert von Stade expands beyond the bounds of his own community to discuss what he sees as the major historic moments of his home region, a

¹⁰⁹ "Gurges," Logeion, accessed September 10, 2020, <https://logeion.uchicago.edu/gurges>.

nebulous zone that often extends well beyond Stade and even beyond the Wadden Sea Coast. In his narrative, he discusses a broad time period, but gives greater detail to his own, where a better quality of sources or in some cases his own eyewitness testimony substantiates what he relates. Although famine and floods occasionally strike, and inexplicable events occur, he rarely interprets them as having clear divine cause or rationale. This reinforces his narrative as a history of human life in an environment driven by natural forces.

In writing his history, Albert must express the movement and interaction of people within the landscape. Details of the environment are emphasized as they further the narrative, suggesting the difficulty of traversing some areas or the dangers wetlands and rivers – and the people who live there – represent. While monastic house foundations can be described with an agricultural metaphor that highlights their connections, the construction of city walls can be used to illustrate divisions. Despite the fact that the countryside is certainly inhabited, there is a clear distinction made between urban or “civilized” places and the rural or nature-dominated environment beyond them. Yet for all this, such rural “spaces” are still sought after by travelers and those who apply their knowledge of the area to survive within and even draw resources from them. Ordinary lives and activities are described alongside the miraculous, providing information about the lives of the people of Stade through stories that have elements not consistent with a “typical” lived experience. In doing so, Albert reveals the multiple uses and meanings seen in every feature of the medieval landscape. Thus, the *Annales Stadenses* offers insights into how the people along the WSC viewed, interpreted, and interacted with the natural world in which they lived.

What is perhaps remarkable in its absence is how Albert never describes defensive measures against the sea. His text was written during the forging of the *goldene Ring* across the

whole of the North Sea coastline.¹¹⁰ The Latin term *agger*, used for ramparts but also for earthworks in general and the dikes that would ring the WSC,¹¹¹ never appears in the *Annales Stadenses*. This means, both physical and conceptual, of dividing humans from nature has no place in a text replete with discussions of the dangers of nature. It is a gap in painting a complete picture of the landscape of the Wadden Sea Coast, one we must turn to other authors to rectify.

¹¹⁰ Bernd Rieken, “Die Friesen und das Meer,” in *Küstenmentalität und Klimawandel: Küstenwandel als kulturelle und soziale Herausforderung*, ed. Ludwig Fischer and Karsten Reise (Munich: oekom, 2011), 66-7.

¹¹¹ “Agger,” Logeion, accessed December 2, 2019, <https://logeion.uchicago.edu/agger>; see glossary for this word’s translation and potential meanings.

CHAPTER III

BOUNTY, DANGER, AND EXPERIENCE ON THE FRISIAN COAST
IN THE *CHRONICON WERUMENSIIUM*

In 1213, the Premonstratensian monastery at Wittewierum, located in the vicinity of Groningen in Frisia, was founded by Emo of Huizinge. It was named Floridus Hortus, or “flowering garden.” Over the course of his tenure as leader of the abbey, Emo kept a chronicle of the events of the monastery and its surrounds, a task taken up by Menko after his death, who was in turn followed by an unknown author up until 1296.¹¹² The result of this work is the *Chronicon Werumensium*,¹¹³ whose original manuscript found its way to the University of Groningen Library and which can be found in edited form in the *Monumenta Germaniae Historica*.¹¹⁴ It is to Menko’s portion of the *Chronicon*, and to a lesser extent his unknown successor’s *Continuatio*, that I shall turn my attention.

The *Chronicon* is a good source with which to explore Frisia’s relationship with nature and in particular its amphibious environment, as it recorded a time of rapid increase in the extent and size of diking and water management infrastructure through the thirteenth century.¹¹⁵ While Albert von Stade’s *Annales Stadenses* is notably lacking in descriptions of dikes, this is not the case in the *Chronicon*. The language of hostile environments and divisions between human and natural environments is employed for recognizable, if often different, purposes.

¹¹² “Description – Monastery: Bloemhof,” Medieval Memoria Online, accessed 19 November, 2019, <http://memodatabase.hum.uu.nl/memo-is/detail/index?detailId=102&detailType=Monastery&browse=When+%28until%29%3F%40%3C1250%25When+%28from%29%3F%40%3E1200>.

¹¹³ The *Chronicon Werumensium* is also referred to as the *Cronica Floridi Horti* and the *Kroniek van het klooster Bloemhof te Wittewierum* (Dutch) due to the multiple names for the location of the monastery and its own title of Floridus Hortus, as well as *Emonis et Menkonis Werumensium Chronica* after its two known authors.

¹¹⁴ Menko, *Emonis et Menkonis Werumensium Chronica*, MGH SS 23: 532; “Description – Monastery: Bloemhof.”

¹¹⁵ Renes, “The Wadden Sea Region as a cultural Landscape,” 48-9.

Furthermore, Menko's chronology is highly dependent on reference both to major floods and to hydrological infrastructure, themes regularly returned to throughout his account. His explanation of the etiology and impact of floods is tied to a broader understanding of the transmission of elemental imbalance from nature to people, often to devastating effect. In relating how flood prevention was pursued, Menko also illustrates the construction of "place" as opposed to "space" through dike-building. Much as in Albert von Stade's account, the *paludes* between human boundaries and the sea are environments people must sometimes rely upon, and the *Chronicon* reflects the multiple uses and meanings of such landscapes.

Telling Time

In providing a narrative of his abbey's history, Menko must describe where it fits in the broader narrative of the Wadden Sea Coast. This means defining a year not just with respect to a standardized reference frame, but to events significant to his readers that in turn mark the most memorable moments of local history. Instances of major floods and water infrastructure construction take pride of place in telling time, speaking of how greatly such elements of their history resonated.

When describing the year 1237, the first year of his tenure writing the *Chronicon*, Menko seeks to lay out its context in terms of how many years it falls from numerous important events:

Anno igitur Domini 1237, a diluvio sancte Iuliane 74, Nicolai 42, Marcelli 19, ab aqueductu stabilito 45, a captivitate Iherusalem 48, prime peregrinationis 47...¹¹⁶

Therefore in the year of the Lord 1237, 74 [years] from the flood of Saint Julian, 42 [from that of] Nicolai, 19 [from that of] Marcellus, 45 from the establishment of the aqueduct, 48 from the capture of Jerusalem, 47 from the first pilgrimage...

¹¹⁶ Menko, *Emonis et Menkonis Werumensium Chronica*, 532.

Menko offers a window into his priorities for remembering and recounting time. First, he offers something clear and (in a Christian worldview) absolute – time as told from the birth of Christ. Yet reference to such large scales of time and a grand narrative of history seems to be insufficient to truly describe when this year fell for Menko’s audience. He immediately turns to major ecological events, mentioning the time since three major floods. Environmental events, albeit ones that tend to have very damaging impacts on people and property, are held up as the most important markers in this narrative of history, or at the very least events all Menko’s readers could recall. Each of these is identified by a saint, presumably due to falling on or near to a Saint’s Day. There is perhaps a comparison to be made to the current practice of naming hurricanes alphabetically, which “makes it easier for the media to report on tropical cyclones, heightens interest in warnings and increases community preparedness.”¹¹⁷ With the advent of modern meteorology, naming storm systems has a preventative purpose in facilitating clear and universal communication about its path and impact. This is not to say that naming storms does not tie into our process of remembering them – the drop in frequency in the name “Katrina” from the 246th most popular baby name in the United States in 2005 to being out of the top 1000 by 2013 might speak to the impact of the name’s appellation to a devastating storm¹¹⁸ – but it is not the only purpose envisioned by modern naming. For Menko, the consistent naming has a purely commemorative purpose, tying into cultural memory of important events and linking floods to a commonly understood way of telling time through a calendar of saints. This practice also exposes a complex relationship between describing time and events – events are used to make

¹¹⁷ “Tropical Cyclone Naming,” World Meteorological Organization, accessed 29 November, 2019, <https://public.wmo.int/en/About-us/FAQs/faqs-tropical-cyclones/tropical-cyclone-naming>.

¹¹⁸ “Popular Baby Names,” Social Security Administration, accessed 29 November, 2019, <https://www.ssa.gov/cgi-bin/babynames.cgi>.

human sense of abstract dates, but in the case of floods, those events are themselves defined, in this case named, by the pre-constructed human relationships with the day on which they fell.

Menko's next step in establishing where events fall in his community's history is to refer to the construction of an aqueduct. Thus, establishing chronology remains centered upon the human relationship with the environment. However, while the previous points of reference are negative, traumatic experiences, the impact of this event is positive: the aqueduct provided drinking water for the nearby community. Here Menko establishes 1237's relationship not only to cultural memory, but to the built environment that is an ever-present reminder of past events. It is also an implicit argument for public works projects – the investment will be remembered and appreciated for decades to come. This is much akin to public works projects in the Roman Empire, where “aqueducts... combined utility, visibility, and longevity in a mixture alluring for people who wished grateful communities to remember them and their beneficial rule.”¹¹⁹ Here Menko substantiates the impact of an aqueduct by its placement in his narrative. Only then, after these landscape and environmental reference points have been invoked, does Menko proceed to matters solely political and human, even ones so pivotal as the First Crusade.¹²⁰ This clarifies a set of priorities for Menko's audience – despite the significance of the Crusades in Christianity's relationship with the world, along the Frisian coast major floods and waterworks had more meaning and memory associated with them. Local catastrophes and local achievements superseded the supranational.

Perhaps more precisely, Menko selects events to situate the narrative based on how they resonate with a local sense of place. Clare A. Lees and Gillian R. Overing note that, “We enter

¹¹⁹ Squatriti, *Water and Society in early medieval Italy*, 11.

¹²⁰ Menko offers a host of other comparative dates following this passage, none ecological in nature; they are omitted for concision's sake. Curiously, Menko appears to be off on the date of the First Crusade by a decade.

into places armed with our cultural memories; we read the landscape, we inhabit it, we shape it, and we remember it.”¹²¹ The *Chronicon* reflects this human impulse. Menko draws from the memories of his place, describing time in his account through the natural events that have most affected the lives of those engaging with the landscape. He further marks it by human actions that have shaped the same landscape in the form of the construction of an aqueduct. Yet the *Chronicon Werumensium* is itself a process of constructing history; by tying the events of the account to those already established in cultural memory, Menko seeks to insert new events into that same cultural memory and redefine the associations of landscape along the lines of his own priorities. Old and new events are juxtaposed and told in a narrative that prioritizes Menko’s perception of the landscape, pushing his worldview upon all future readers.

Explaining Weather and People

Within Menko’s account, explanations can be given both for natural forces and for the effects they have. 1237, the first year of his account, is an excellent case in point due to its combination of unusual weather patterns and widespread disease that Menko must seek to explain. The links made between abnormal weather and disease show how Menko conceives of a natural environment that depends upon the correct set of elemental properties to be healthy and that can transfer its own ailments into people.

Menko’s entry for 1237 describes each season and its weather in detail before progressing to the challenges the year posed for the people of Frisia:

Anno vero Domini 1237. precessit hiems humida et calida, et in hoc distemperata; et ideo multe secute fuerunt infirmitates. Quoniam secundum proprietatem temporum hiems debet esse

¹²¹ Clare A. Lees and Gillian R. Overing, “Anglo-Saxon Horizons: Places of the Mind in the Northumbrian Landscape,” in *A Place to Believe in: Locating Medieval Landscapes*, ed. Clare A. Lees and Gillian R. Overing (University Park: The Pennsylvania State University Press, 2006), 6.

frigida et humida... estas vero fuit horribiliter humida et frigida usque ad Kal. Aug. Postea successit calor et siccitas satis immoderate; et sic fere annus totus fuit distemperatus et nature contrarius. Unde aer corruptus per spiritum attractivum vel cibum ex aere corruptum vel edendo perceptus diversas in hominibus generabat infirmitates.¹²²

In the true year of the Lord 1237. Winter progressed humid and warm, and distemperate in this; and therefore many illnesses have followed. Yet the winter ought to be cold and humid after the nature of seasons... the summer in truth was very horribly humid and cold all the way to the Kalends of August. Afterwards warmth and dryness entered sufficiently without measure; and thus the whole year was entirely distemperate and against nature. Whence the corrupted air generated, through attractive air or food corrupted from the air or else having been seen in eating, diverse sicknesses among men.

Menko invokes the proper seasons and the elemental properties each should possess, using this as a framework to explain how 1237 was an abnormal year. Yet problems in the year's weather go beyond that, directly harming people's health. Menko describes the air as *corruptus*; it has been made unwell and out of balance. The same air displaying disease-causing properties has been presenting unseasonable weather all year. If disease is a humoral imbalance, the sick have been infected by the air they breathe and interact with. Menko is not unusual in connecting disease transmission to a form of "corrupted" air,¹²³ but he is explicit here in how the air can be diagnosed. The air is no mere mode of disease transmission, but itself infected and displaying the symptoms of an elemental imbalance, hot when it should be cold and cold when it should be hot. Much as a physician would diagnose a humoral imbalance in a person, Menko attempts to do so with the natural environment, treating it almost like an organism itself. He describes when and how this atmospheric infirmity behaves, detailing a pathology in terms of symptoms across time

¹²² Menko, *Emonis et Menkonis Werumensium Chronica*, 523-4; left out is an extensive discussion of the nature of the elements.

¹²³ "Corrupted" air as the source of disease has its roots at least as far back as Avicenna; John Aberth, *An Environmental History of the Middle Ages: The Crucible of Nature* (New York: Routledge, 2013), 69-70.

rather than across a body. Unfortunately, however, the air cannot be treated, and people must suffer through both the air's sickness and their own.

The practice of connecting medical ideas about elements and the body to changes in the elements in nature is not found only in the *Chronicon*. Victoria Sweet's work on Hildegard of Bingen's writings notes that her perception of the elements was not abstract, but one of material found both inside and outside of bodies. This is seen in her attitude that the use of elemental properties in medical practice is akin to a gardener's use of the same elemental principles to encourage growth.¹²⁴ This knowledge of theory supports Han Nijdam's assertion that Frisia was by no means a backwater in understanding of medical theory.¹²⁵ Though Frisia may have been *insolentia* (insolent) in the eyes of authors like Albert von Stade, it was by no means ignorant. Menko also treats the elemental properties of the natural world as something observable and real, but the connections he draws between humans and nature are far less beneficial than those seen by Hildegard. While Hildegard's perspective on medicine reflects a positive vision in which tools to treat the body and natural world exist in concert, Menko reflects a fear that an unhealthy environment will be a source of infection that cannot be treated, and that its effects will be devastating to both humanity and nature. After all, the outcome of this distemperate year is to cause so much disease that, "through all Frisia the healthy scarcely sufficed to tend to the sick, nor now could the infirmatories take in the sick."¹²⁶ In Menko's view, such an environmental sickness has deadly consequences felt by all, but this is by no means the only threat to emerge from the natural landscape of Frisia.

¹²⁴ Victoria Sweet, "Hildegard of Bingen and the Greening of Medicine," *Bulletin of the History of Medicine* 73, no. 3 (Fall 1999): 388-9.

¹²⁵ Han Nijdam, "Compensating Body and Honor: The Old Frisian Compensation Tariffs," in *Medicine and Law in the Middle Ages*, edited by Wendy J. Turner and Sara M. Butler (Boston: Brill, 2014), 47.

¹²⁶ Menko, *Emonis et Menkonis Werumensium Chronica*, 524; "per totam Frisiam vix sufficerent sani ministrare infirmis, nec etiam infirmitoria caperent infirmos."

Floods and Dikes

While unseasonable weather and disease were threats to the lives of the people of Frisia, perhaps an even greater threat lay along the shores of the WSC. As previously noted, floods were traumatic experiences that resonated with Frisians, enough so that Menko chose to place them before other events in establishing relative chronology. His descriptions of these floods, and the extensive efforts to resist their destructive impact, provide even more insights into how Frisians defined their landscape.

Perhaps the most effective approach to hold back floodwaters was through the construction of an earthen dike, an *agger*. The construction of dikes entailed a vast effort and, as Menko relates, might not always be successful at flood prevention:

Anno Domini 1257. iniciatus fuit novus agger in Sonde, et satis fuit firmatus, sed cum non esset satis exaltatus, increscente nimis oceano, dominica ante festum Gereonis Fivela fuit irrupta¹²⁷

Year of the Lord 1257. A new dike was begun in Zand,¹²⁸ and it was strengthened enough, but since it was not elevated enough, with the sea growing too much, on the Sunday before the feast of Gereon the Fivel [River] broke in.

Menko portrays the challenge and uncertainty of dike-building. While strong enough to resist the power of the floodwaters, this dike simply is not tall enough to stop them. Physically and conceptually, dikes serve to delineate human and natural landscapes with clear, effective boundaries.¹²⁹ A place, as Lawrence Buell notes, “entails a spatial container of some sort,”¹³⁰ and what is a dike if not a “container” around an area? An *agger*’s role as a boundary is further

¹²⁷ Menko, *Emonis et Menkonis Werumensium Chronica*, 547.

¹²⁸ “Orbis Latinus online,” digitization of Graesse (1909), accessed December 3, 2019, <http://www.columbia.edu/acis/ets/Graesse/contents.html>.

¹²⁹ Hans-Ulrich Rösner, “The Wadden Sea: A natural landscape outside the dikes,” in *Waddenland Outstanding: History, Landscape, and Cultural Heritage of the Wadden Sea Region*, ed. Linde Egberts and Meindort Schroor (Amsterdam: Amsterdam University Press), 2018, 85-6.

¹³⁰ Buell, *The Future of Environmental Criticism*, 63.

emphasized by the ambiguity of its meaning, as it can also refer to any sort of rampart or defensive earthwork.¹³¹ Just as an *agger* in its sense as a rampart is a defensive structure, so too is an *agger* as a dike, albeit against the forces of nature, not people. This conceptual role of an *agger* was already seen in the WSC through the Danevirke's function as the boundary of a decidedly Danish region, and in Albert von Stade's association of walls with independence as well as a way to secure a troublesome, a more "wild," region. While it remained a clear and persistent boundary, the Zand dike failed to achieve its most important purpose, as it was incapable of preventing the incursion of water under the conditions of the 1257 flood. While a strong dike serves to define a conceptual boundary of a "place," only one that is both strong and tall possesses the qualities needed to fulfill its intended role.

Ten years later, Menko recorded another flood in the region that once more reflects the role of dikes in defining the landscape:

Anno Domini 1267, anno a diluvio sancti Marcelli 50. Inchoante...
per plurimas partes Frisie oceanus aggeres
infringens diluvium induxit.¹³²

In the year of the Lord 1267, in the start of the 50th year from the
flood of Saint Marcellus... through many parts of Frisia the ocean,
breaking the dikes, brought in a flood.

In describing this flood, Menko once more refers to prior floods to help place it in time. In doing so, floods become a familiar, almost cyclical, experience of Frisian life, with the same mention of the flood of Saint Marcellus seen in the 1237 record. Menko further describes how a flood operates, with the ocean having to break through the dikes in order to begin a flood. But the flood is seen as a separate entity from the ocean – the ocean *induxit*, "brought in," the flood, rather than itself being the flood. Although the barriers are breached they still divide the water

¹³¹ "Agger," Logeion, accessed December 2, 2019, <https://logeion.uchicago.edu/agger>.

¹³² Menko, *Emonis et Menkonis Werumensium Chronica*, 552.

within and beyond the permeable boundary they have become. The ocean breaks the dikes, but as its waters enter the land within the dikes the water becomes a partially separate entity extruded from the ocean. If human landscapes are a “place,” and their boundaries are made manifest through dikes, the ocean, a feature of a “space,” forms a flood by forcing a part of itself into the “place” within the dikes. The ocean belongs where it is, whereas the flood is an imposition of “space” upon a landscape generally under firm human control.

Yet Menko’s description of the 1267 flood does not end here, as he sees an opportunity to further illustrate the lessons to be drawn from the year’s terrible events:

Sola vero Fivelgonia ab hac plaga fuit libera, forte quia suos aggeres plus aliis Frisonibus exaltavit, vel potius quia pauperes de diversis terris illuc confluentes, elemosinis et hospiciis benignius pertractabant, et potissimum quia iam ad 12 annos vel ultra per iudices eorum et alios potentes bona servabatur iusticia, et equum fuit iudicium divitibus et potentibus ac pauperibus,... consilium principaliter ad hoc addente abbate Floridi Orti, cuius consilio dicti laici et alii nobiles terre satis acquieverunt.¹³³

In truth Fivelgonia alone was free from this blow, because by chance it had elevated its dikes more than the other Frisians, or rather because the poor, flowing together from many lands, were handled by alms-givings and hospitalities, and especially because now to twelve years or more good justice was served through their judges and other powerful men, and fair was the judgement by the wealthy and the powerful and the poor,... with the abbot of Floridus Hortus adding the foremost advice to this, by whose counsel having been given the laity and the other nobles acquired enough land.

In the face of this storm, only the community that has expanded their system of dikes is spared. While not explicitly stated, the failure of lower dikes reflects the dangerous combination of land subsidence and powerful storm systems experienced in the region during the latter half of the twelfth century. These conditions forced the continual increase in the size of dikes and the

¹³³ Menko, *Emonis et Menkonis Werumensium Chronica*, 552.

systems designed to support them in order for communities to survive.¹³⁴ It also reflects the expansion of the dike systems further into marginal land, as seen in Fivelgonia alone having a developed enough dike system to survive. Today, the Fivel River (the river that gives its name to Fivelgonia) no longer exists due to the expansion of drainage and water control systems.¹³⁵ Fivelgonia's avoidance of the flood is no accident, but a reflection of the notably developed human presence in the region.

While the failure of the dikes in 1257 might have been the true impetus for their elevation, Menko ensures that the real credit for these defensive measures goes to the monastery. The abbot is shown to have influence on the nearby community, providing counsel that not only ensures their wealth but their safety. This is an extension of the monastic propensity to invest in waterworks and infrastructure projects due to their "stability of place and the expectation of permanence."¹³⁶ Protection from the flood is also connected to the upstanding nature of the community, with the flood of water preceded by a flood of people in need of aid. Compassion given to them and the general just stewardship of the community is given as a further reason for their deliverance from the flood. Protecting Fivelgonia is achieved through a combination of active public works, a healthy community, good leadership, and of course respect to the monastic community in the vicinity. Dike-building serves as the core of a collective effort to define "place" in the face of the ocean's "space." As much as floods threatened the boundaries between these two, they also forced their construction, maintenance, and expansion. This constant

¹³⁴ William H. TeBrake, "Hydraulic Engineering in the Netherlands During the Middle Ages," in *Working with Water in Medieval Europe: Technology and Resource-Use*, ed. Paolo Squatriti (Boston: Brill, 2000), 102-4.

¹³⁵ P. C. Vos and E. Knol, "Holocene Landscape Reconstruction of the Wadden Sea area between Marsdiep and Weser," *Netherlands Journal of Geosciences* 94, no. 2 (June 2015): 161, 176.

¹³⁶ Squatriti, *Water and Society in early medieval Italy*, 20; Squatriti points to these traits as reasons for aqueduct construction.

challenge served to reinforce – to “lock in” – the divisions of the WSC, solidifying patterns and territorial units of land use and dividing natural and manmade environments.

Causality and Consequences

While floods are destructive influences, they are not created spontaneously from the ocean, nor is the impact of the flood confined solely to the immediate destruction it brings with it. In Menko’s view, a flood is drawn from the ocean by other forces of nature, and just as the air can pass on something harmful to people, air in the form of wind can cause floods. Similarly, the destructive nature of the flood itself can be passed on to the earth and those that depend on it via the salt oceanic floodwaters bring with them.

Menko’s description of a flood in 1246 explains the origin of such a disaster, and displays the responses to floods as well as its consequences for human life and livelihood:

Eodem anno in festo Luce euangeliste crescente rabie ventorum, aggravata est inundatio salsi maris, et sic factum fuit diluvium particulare, et multe naves fuerunt submerse vel confracte, et homines submersi. Quedam vero ad aggeres appulse vix homines conservarunt. In eadem inundatione abbas Floridi Orti emit navim magnam a civibus de Liuwerth periculis marinis versus Spik appulsam.¹³⁷

In the same year, on the feast of Luke the evangelist, by the arising frenzy of winds an inundation of salt sea was stirred up, and thus a flood was made especially, and many ships were sunk or breached, and men drowned. Indeed in the same driving against the dikes men scarcely preserved them. In the same inundation the abbot of Floridus Hortus sent out a great ship after the citizens on account of the dangerous seas of Liuwerth towards the Spik landing.

Much as in the case of plague, floods emerge not from the sea but from the air. Here the air is mustered in the form of the winds, and the idea of this being the main source of floods is easily

¹³⁷ Menko, *Emonis et Menkonis Werumensium Chronica*, 540.

drawn from observations of how wind creates turbulence in water. Regardless of how it functions or was inspired, once more the air is an active tool in bringing calamity. The authors of the *Chronicon* make no distinction in their use of *inundatio* and *diluvium* as Albert von Stade does, but this does not imply their understanding of floods is fundamentally different. While Albert von Stade uses the terms for a flood to delineate between divine and natural floods, Menko avoids supernatural etiology by prefacing his first description of a flood with how it developed through natural forces. Moreover, the *Chronicon* does not begin at Creation, or indeed at any point for which the Bible can serve as a source of historical events. Neither Menko nor the other authors of the *Chronicon* had to distinguish between a flood that was – in their understanding – clearly divine, one described by the authority of holy scripture, and those occurring in everyday life.

What is perhaps more worthy of note than the flood's origin is the destruction Menko depicts. While people do die in the flood, the dikes hold and the flood does not impinge upon the land within them. This complicates the simple image of the ocean becoming a flood only within the bounds of the dikes. Once more, the flood is formed from the ocean (*inundatio salis maris*), but its destruction is visited outside the dikes and still remains worthy of Menko's recording. The land (and water) beyond the dikes is still an ecosystem in which humans see value, and the flood upsets the human place in it. Here the flood damages ships, the very tools by which people navigate and exploit the landscape beyond the dikes. Once more, the flood is notable for how it impinges upon human lifeways. In keeping with his portrayal of the flood in 1267, the actions taken by the abbot are well-advised (Menko does not proceed to describe the abbot's ship sinking). He emphasizes how his actions serve the interests not just of the monastery, but the community as a whole, with the ship sent out for the benefit of others. Menko imparts an image

of a monastic community whose concerns extend beyond their own walls, seeing to their physical as well as spiritual well-being, exceptionally skilled in surviving this drenched environment.

Yet for all this courage in facing down the dangers of the ocean, it is in the aftermath of a flood that the true horror of such a catastrophe is revealed, as depicted in Menko's account of 1249:

Et non fuit locus, quo quisquam flagellum Dei evaderet.... In Silvis autem et aliis locis, ubi propter locorum eminentiam siligo per salsam aquam non poterat attingi, aliud accessit flagellum. In agris enim eorum, pascuis salsugine infectis, quasi nulla fuerunt gramina nec fenum in pratis, et sic misera pecora pre fame terram corruptam cum radicibus evulserunt et fere in illis locis omnia mortua sunt.¹³⁸

And there was no place, which any scourge of God passed over.... Moreover in Silvae and other places, where on account of the prominence of the places the winter wheat was unable to be touched by the salt water, another scourge struck. For in their fields, with the pastures having been infected with brine, it was as if no grass nor hay was in the meadows, and thus miserable cattle in the face of famine tore out corrupted earth with the roots and fully in those places all died.

Menko makes it clear that while many places may have a portion of their land out of reach of the flood, no community was so secure as to not suffer in some way. All depended to some degree on land that this flood touched, and the effect of saltwater ruined that land's productivity for human needs. Yet the effect of saltwater is not just to make the land's products inedible or reduce yields, but to pass along a sort of elemental pathogen. Not only is the land unproductive, with grass and grazing fodder failing to grow that year, but Menko conveys that the cattle are reduced to consuming *corrupta terra* ("corrupted earth"). Both humans and the animals they depend upon see their food sources destroyed by the ecological impact of salt water. This adds

¹³⁸ Menko, *Emonis et Menkonis Werumensium Chronica*, 543.

depth to Menko's choice to describe the 1246 flood as an *inundatio salis maris* ("an inundation of salt sea"). Menko is playing off an understanding that the year's flood will have additional consequences beyond merely the death and destruction of the floodwaters alone. He also emphasizes a continuous contact between people and the natural world, as boundaries between them are never perfect. While humans may attempt to live in areas only touched when floods become exceptionally bad, between the dangerous ocean and the human boundaries of dikes exists land upon which people depend but which they cannot trust.

Wading into the Wetlands

Despite the monastery's extensive interactions with dikes and floods as reflected in Menko's work, he is utterly silent with regard to the *palus*, the Latin term for most forms of wetland.¹³⁹ Lest we see this as a reflection of the environment or the perception of it by the monks of Witterwierum, and thus a remarkably different image of the Frisian landscape from that painted by Albert von Stade, the *Continuatio* of the *Chronicon Werumensium* is more than willing to address activity going on in the *palus*. Its use in the description of a 1287 flood underlines the interactions of this part of the ecosystem with human memory and marginal activity.

In addition to the human consequences recorded in the *Continuatio*'s account of 1287, the flood is notable for how it travels across *paludes*:

In locis humilibus sine obstaculo impetus aquarum paludes transivit. Nec fuit mirum, quia a tempore cuius non extat memoria in partibus istis tam magna salsi maris ebullitio ad mensuram quinque pedum non est visa.¹⁴⁰

¹³⁹ "Palus," Logeion, accessed June 18, 2019, <https://logeion.uchicago.edu/palus>; "Cross Database Searchtool," BREPOLis, accessed December 2, 2019, <http://clt.brepolis.net.libproxy.library.wmich.edu/cds/Default.aspx>.

¹⁴⁰ *Emonis et Menkonis Werumensium Chronica*, 565.

In low places the force of the waters crossed the wetlands without obstacle. And it was not amazing, that by his time memory in those parts did not exist that so great a swell of salt water to the measure of five feet had not been seen.

Once more the role of memory is emphasized, yet here it is a lack of memory that keeps people from fully recognizing how abnormal this flood is. Despite the resonance of floods in Frisian memory, this flood is so exceptional that it exceeds the ability of cultural memory to recognize how significant this flood was. The flood seems unaffected by the natural buffer the wetlands form between the ocean and dry land, crossing this liminal zone that sits between the understood human “places” and the trackless “space” of the ocean. Yet wetland environments do serve a major role in absorbing floods, and research has found preserving or restoring wetlands to be both an efficient and economical route to reducing flood damage.¹⁴¹ Why, then, does the *Continuatio* portray a wetland as no obstacle to the flood? A simple explanation is that the flood carried enough force that low wetlands were themselves swamped, their capacity to absorb water overcome long before the flood lost its strength. A season of high rains could have overloaded the wetland, leaving it unable to absorb more, or the early stages of drainage could already be underway there, reducing the wetland’s capacity. But perhaps, much like in our own history of dealing with wetlands, the population of the WSC overlooked this crucial ecological role in the belief that such land fundamentally had little value without human intervention. As an already-amphibious environment, envisioning it being a way to reduce the strength of floods requires a re-imagining of how to engage with water. Wetlands do not possess the visually arresting barrier of an *agger*, a clear line beyond which a flood cannot (or at least should not) reach. Much like the subsidence of drained land, the hydrological benefits of wetlands and the consequences of

¹⁴¹ “Wetlands: Protecting Life and Property from Flooding,” United States Environmental Protection Agency, May 2006, <https://www.epa.gov/sites/production/files/2016-02/documents/flooding.pdf>.

their drainage may be a facet of the natural environment as yet unknown to the *Continuatio*'s author.

While overlooking the important role of wetlands in managing a coastal environment, the *Continuatio* does acknowledge an interaction between floods and wetlands that is valuable for people:

Et plerique pauperes, recedente aqua, paludes ascenderunt,
construentes ibidem casas, in quibus frumentum quod ibi ab aquis
fuerat proiectum triturbant.¹⁴²

And many poor people, with the water receding, went up to the
wetlands, constructing in that place huts, in which they threshed
the grain which had been cast out there by the waters.

For the poor, the wetlands become a place to be sought, not avoided. The flood, rather than making the wetland even more unsafe, instead transforms it into a place of unexpected value. The marginal land of the wetlands is attractive to those who themselves exist at the margins of society. The aftermath of the flood reveals the wetland as a place that traps and holds a bounty otherwise carried away from human reach. This calls to mind gleaning, an accepted practice in much of medieval Europe whereby the infirm and on some occasions the poor were granted legal rights to recover the grain left behind during the initial harvest.¹⁴³ The *Continuatio* imagines a sort of post-catastrophe gleaning, with a portion of the harvest destroyed by the flood recovered by those who might otherwise seek their sustenance on harvested fields. For those with little property to be lost, a flood that strikes only the fields may have posed little threat, and the wetlands into which the debris was carried became a new gleaning ground.

¹⁴² *Emonis et Menkonis Werumensium Chronica*, 565.

¹⁴³ W. O. Ault, "By-Laws of Gleaning and the Problems of Harvest," *The Economic History Review* 14, no. 2 (1961): 211-3.

This passage also mirrors the activities of Redwin and Ethelerus in the *Annales Stadensis*, with people venturing into wilder environments beyond the bounds of cities or dikes to seek needed resources. The sod-hunters of Albert von Stade’s account seek out specific places to dig for what they need, and the poor of 1287 Frisia realize they have a small window to gather extra food washed from the fields. In this account, the wetland is not simply a “space,” one untouched by human hands; it is to an extent converted into a “place,” not just through the kind of knowledge of the terrain demonstrated by Redwin and Ethelerus, but through the construction of the *casae*. These *casae* are likely a form of field house – small, often temporary structures built for those doing agricultural work far from home.¹⁴⁴ Even if such structures are very short-lived, they give definition to an environment otherwise devoid not only of human infrastructure, but also of a clear delineation between land and sea. As noted by William Cronon in observing modern constructions of a “wilderness,” such a designation is often complicated by the presence of inhabitants living within it or the resources extracted from it.¹⁴⁵ As unfriendly as the *palus* may be to long-term human habitation or to those without the skills to navigate it, these accounts show it continually disturbed by humans. Without the dikes to hold back the sea, however, these human marks are bound to disappear as the wetland reverts to a “space.”

Why Menko entirely avoids using the term *palus*, and through it seemingly any description of the ubiquitous wetlands of his home, is something of a mystery. It cannot be claimed that the wetlands were largely drained by this period, as evidenced by the term’s use by the author of the later *Continuatio*, nor did Menko shy away from describing the environment,

¹⁴⁴ Jeffrey H. Altschul, Ibrahima Thiaw, and Gerald Wait, *A Slave who would be King: Oral Tradition and Archaeology of the Recent Past in the Upper Senegal River Basin* (Oxford: Archaeopress Publishing LTD, 2016), 292; see glossary for a more extensive discussion of field houses.

¹⁴⁵ William Cronon, “The Trouble with Wilderness: Or, Getting Back to the Wrong Nature,” *Environmental History* 1, no. 1 (1996): 7-9.

including low-lying areas prone to flooding. It is certainly not the introduction of a new word or a newfound application of it to the environment of this region, as Emo employs it twice in his portion of the *Chronicon*.¹⁴⁶ Yet avoid its use Menko does. When employed by his successor, it helps supply an understanding of the territory that lay outside Menko's dikes and yet did not belong solely to the ocean, a land that even in the wake of natural disaster had much to offer.

Conclusion

Using medieval history to communicate the WSC as the "cultural landscape" Hans Renes envisions requires not just addressing the physical activities of the medieval population of this region and the modern remnants thereof, but the ideological and cultural underpinnings of their relationship with nature. The *Chronicon Werumensium* is replete with examples of both descriptions of human alterations of the landscape, and evidence of how the people of the WSC experienced and understood their environs. The *Chronicon* demonstrates a narrative of Frisian history punctuated first and foremost by the coming of floods. In such a context, the creation, expansion, and maintenance of hydrological infrastructure, namely the dikes built to defend against these floods, naturally became a feature of the account. The floods themselves are explained as outgrowths of the forces of nature, much like other imbalances of a natural world whose own ills are seen as comparable to those of people. First and foremost, however, they are impositions of "space" upon the "places" of the manmade landscape within the dikes. Floods threaten not just human lives but their livelihoods and the barriers meant to define where water should not reside. Beyond the dikes, however, lies additional land at once valuable to people but equally unstable, more readily threatened by floods. It is in this environment of manmade

¹⁴⁶ Emo, *Emonis et Menkonis Werumensium Chronica*, 511,517.

landscapes in constant need of defense, surrounded by amphibious and aquatic spaces, that the peoples of the Wadden Sea Coast defined their relationship with the natural world.

CHAPTER IV

QUANTIFYING AND NEGOTIATING LAND
IN THE *AVIA RIPENSIS*

As we complete this journey across the Wadden Sea Coast, we finally come to its northernmost extent in what is both medieval and modern Denmark. Near to this end of the region is Ribe, possibly the quintessential Viking trade port, a city that remained an active hub for Denmark's western trade throughout the Middle Ages. Established on the eastern side of an island of sand in the midst of tidal deposits, it had the advantages of river and sea access while enjoying a hopefully more protected position.¹⁴⁷ To understand this episcopal seat's relationship with the landscape, we are greatly aided by the existence of the *Avia Ripensis*.¹⁴⁸ This text, also known as the *Ribe Oldemoder*, is Denmark's oldest cartulary, preceding Aarhus' by some twenty years.¹⁴⁹

Pinning down the dating on such a source can be a difficult business, as it can (and in this case does) contain earlier documents transcribed into it, as well as numerous other records added over the following centuries. Based on the choice of documents included, which changes over time, as well as the date of the last entry written by the first hand, the cartulary was likely composed beginning around 1290. With that said, numerous hands can be identified in the

¹⁴⁷ Stig A. Schack Pedersen, Geraint Cooksley, Marc Gasset and Peter Roll Jakobsen, "Detection of Terrain Changes in Southern Denmark using Persistent Scatter Interferometry," *Geological Survey of Denmark and Greenland Bulletin* 23 (2011), 43.

¹⁴⁸ "Avia Ripensis," in *Corpus codicum Danicorum medii aevi*. 8, ed. Johannes Brøndum-Nielsen, Erik Kroman, C.A. Christensen, Karl Martin Nielsen, Erik Buus, Peter Skautrup (Munksgaard, 1967), 370-428; this is a published facsimile of the manuscript, and for clarity's sake I will refer to the numbering of the original manuscript in later citations. Oluf Nielsen's 1869 edition of the text will be used for the majority of the cited Latin text.

¹⁴⁹ Anders Winroth, "Papal Letters to Scandinavia and Their Preservation," in *Charters, Cartularies, and Archives: The Preservation and Transmission of Documents in the Medieval West*, ed. Adam J. Kostó and Anders Winroth (Toronto: Pontifical Institute of Mediaeval Studies, 2002), 181-2.

document, and continuations were added well into the sixteenth century.¹⁵⁰ The manuscript consists of four different sections grouped by the type of documents contained within, of which only the fourth was added after the initial period of composition.¹⁵¹ The manuscript's alterations do not end there, with pagination added by a bishop who died in 1614, indicating the presence of the two lost folios (eleven and twelve), a loss likely tied to the damage on folio 13.¹⁵² The hands vary in style greatly, from small, tight script that conforms to well-defined columns to an approach to writing that is perhaps best characterized as “messy” (see figs. 3 and 4). Although many of the hands come from the subsequent centuries, the initial composition dates from the late thirteenth century, when the last entries of the *Annales* and the *Chronicon* were written, and many of the documents explored come from within the period these texts focus upon. From the *Avia*'s mix of documents a wealth of information about medieval Ribe and its approach to the landscape can be gleaned.

The rest of this chapter will explore how the *Avia Ripensis* discusses the landscape. Ribe's royal mill demonstrates the challenges of grappling with infrastructure that had an imprint upon the landscape beyond the property of its owner, as well as hinting at the multi-use aspects of created environments. The revenue lists and charters show land measured by its human geography, both in terms of administrative regions and agricultural yield. Furthermore, the prebends and church revenue lists demonstrate how the value of the church and its lands were expected to change, although the changes Ribe experienced may not have conformed to their desires.

¹⁵⁰ *Samling af Adkomster, Indtægtsangivelser og kirkelige Vedtægter for Ribe Domkapittel og Bispestol, nedskrevet 1290-1518, kaldet "Oldemoder" (Avia Ripensis)*, ed. Oluf Nielsen (Copenhagen: Thieles Bogtrykkeri, 1869), v-vi.

¹⁵¹ *Samling af Adkomster*, iv.

¹⁵² *Samling af Adkomster*, iii.

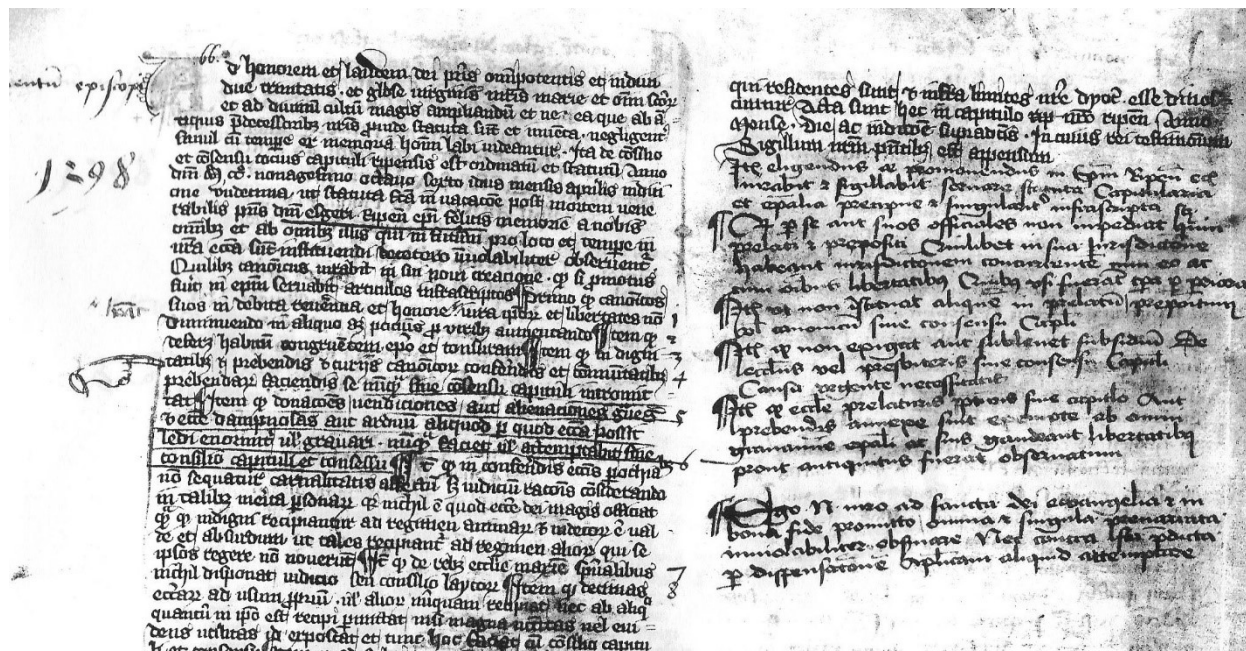


Figure 3: Avia Ripensis, 8v. Text written by two hands of the Avia (with the dates annotated in a third)

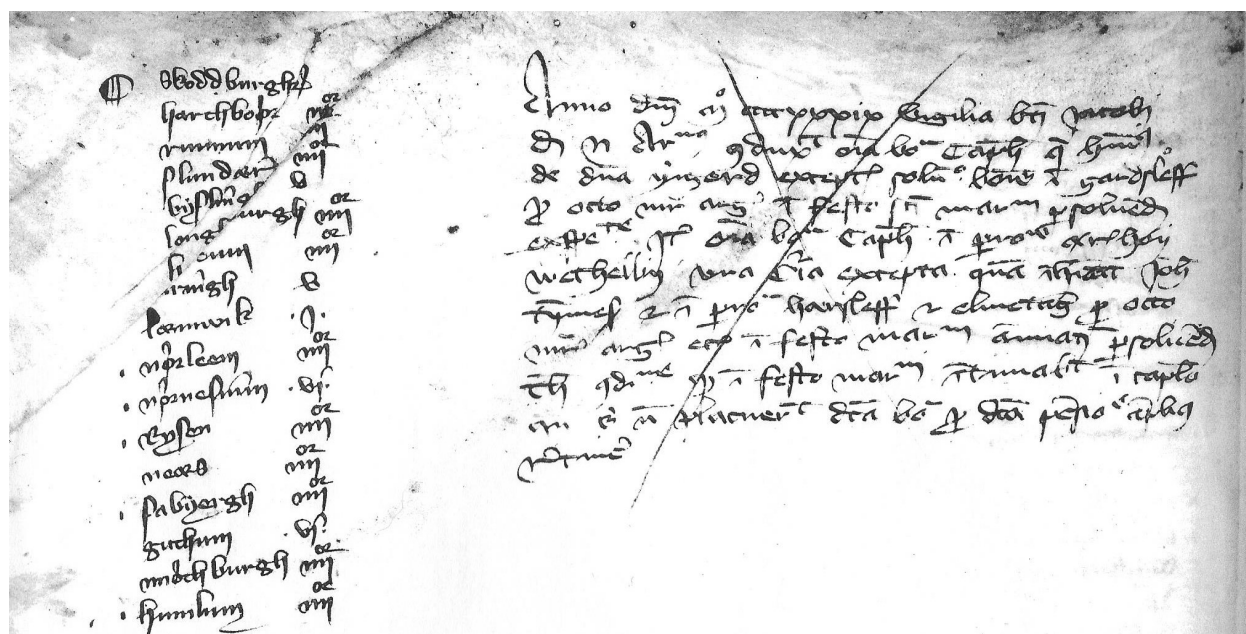


Figure 4: Avia Ripensis, 30v. The conclusion of the church revenue list, with the crossed-out text in the right column. The columns are distinctly less coordinated, and the text looser, than in figure 3.

Ribe's Royal Mill

In the mid-thirteenth century, a royal mill was built in Ribe. Its operation altered the landscape due to the upstream flooding, and a mill-pond formed. The loss of land to flooding, necessary for mill's operation, was a cost inflicted by the Danish king upon the local community, and in particular the bishop of Ribe. In this case, the *Avia Ripensis* provides insights into how land lost to cultivation could still be valued, and to the additional opportunities the mill created.

The 1255 charter describes the arrangements made to handle the change in the local environment:

C. dei gracia danorum slauorumque rex omnibus presens scriptum cernentibus in domino Salutem. Notum esse volumus tam presentibus quam futuris, quod nos, habito meliorum et maiorum regni nostri consilio, Domino episcopo ripensi nomine ecclesie sue pro terris, quas inundat molendinum nostrum ripis in lustorpmark, harthboøræ [] scotauimus iure perpetuo possidendum. Nobis autem omnes terras, que de lustorpmark sub inundacione dicti molendini nostri iacent, scotauit dominus episcopus versa vice possidendas.¹⁵³

(Christopher I), by grace of God king of Danes and Slavs, to all viewing the present writing, greetings in the Lord. We wish to be known by those present as well as by those in the future, by the wisdom of our kingdom in the way of the better and the greater, to the lord bishop of Ribe in the name of his church for the land, which our mill floods on the banks in Lustorpmark, Harthboøræ [] we pay for the possession by perpetual law. However, the land, which away from Lustorpmark is thrown under the flood of our said mill, the lord bishop paid to us all in reverse for the possession.

The use of language implies that this is was not a remediation for material losses, but a payment for the rights to possess the land. Because the land still had a proper owner, should the mill cease operating and the mill-pond be drained (in the document's language, if the mill's flooding ends),

¹⁵³ *Samling af Adkomster*, 11; the illegible line before "scotauimus" may mean the flooding affected further communities and may have given more detail to the payment given. I have omitted the latter portion of the charter, as it pertains only to the witnessing of the document and the date it was made upon.

the land would not be “new” or unclaimed, but have a legal owner under the terms of this agreement. This represents a kind of political expediency, with the king paying for the environmental impact of the mill as the full impact became evident and continuing to recognize the original right to ownership despite the intrusion of water. This further reinforces how land had multiple uses, although not all were compatible. While the construction of the mill and its operation may have taken precedence, the king and those with a stake in local land use were not blind to the opportunity cost of the land becoming a mill-pond.

Yet in the loss of this arable land, which clearly required compensation, there was also something gained. The arrangement included the bishop’s possession of submerged land outside Lustorpmark, with the bishop paying for the right of its possession just as the king paid for the possession of the other land his mill-pond covered. The purpose of the bishop paying for submerged land is not stated, but it was likely payment for use of portions of the mill-pond as a source of fish. This is supported by the common trend of using mill-ponds for fisheries, as seen not only in the story of Geverhardus in the *Annales*, but also across Europe.¹⁵⁴ Acquiring a significant portion of the new mill-pond for fish represented a valuable opportunity to secure a resource for the cathedral chapter, one the king had to be paid for control of. The mill may be described as a single unit, but it consisted of multiple sections of earthwork, the mill building itself, and sections of pond that could be leased out, each of which had its own value. The establishment of the mill entailed a cost in money and land, but one that itself provided new opportunities as the purpose of the space it altered was reimagined.

This document offers a window into a subject the previous historical narratives fail to provide – while stories of dikes failing or being overtopped abound, attention was not given to

¹⁵⁴ Squatriti, *Water and Society in early medieval Italy*, 129.

the visible impacts of infrastructure on the landscape. These are two stories that must be told together. Indeed, while the purpose may differ greatly, the skills behind creating the dikes and this mill-pond are not so different. Ribe is marked by three sections of dams, known as the Overdammen, Mellemdammen, and Nederdammen, built to control water flow into the mill. While built in order to manage the royal mill, they also created a main route through the developing town. Consequences of the mill were not only felt by upstream fields, because the dams closed off access to the old waterfront and forced development to occur to the west, downstream from the dams and around the cathedral.¹⁵⁵ Much as dikes helped define the environment across the WSC, here the dams determined a new trajectory for Ribe's economic and urban development.

1255 is the first year the mill was attested to, and it is important to note that the only aspect of its construction and operation addressed was the environmental impact it had upon other landowners. That this was the first document referring to the mill should perhaps not be surprising, as the construction project's royal support and purpose did not impinge directly on church property until the flooding began. Yet it does represent how such important civic works fall outside the interests of other records; that is, until their operation had external impacts. The details of the mill's operation or its construction were not recorded, although even in other cases where the earthworks are described the mill building itself rarely is.¹⁵⁶ Although the royal mill has ceased to exist, the dams themselves survived, becoming the course Ribe's central pedestrian street now follows.¹⁵⁷ Like the dikes we have discussed before, the dams encouraged development within the manmade "places" they helped define, areas where uncontrolled water

¹⁵⁵ *Samling af Adkomster*, 60.

¹⁵⁶ Squatriti, *Water and Society in early medieval Italy*, 129.

¹⁵⁷ "Ribe Pedestrian Street," Visit Ribe Esbjerg, accessed August 19, 2020, <https://www.visitribesbjerg.com/ribe-esbjerg/plan-your-trip/ribe-pedestrian-street-gdk610536>.

was excluded. That being said, there is an irony here in that this process encouraged development closer to a coast the dams did nothing to protect against.

Human Valuing of Land

Mills were only one aspect of land use that the *Avia Ripensis* needed to reckon with. Much of the text concerns the transfer, allocation, and recording of property, most commonly in the form of land and the products from it. The charters lack valuable information to more precisely define property boundaries, suggesting a dependence on local knowledge of the landscape. Across the *Avia*, land is ascribed value in many terms, from its use and value relative to other industries to measurements based on the dominant product coming from it.

A 1272 charter explains one sale of property that uses commonly understood terminology and carefully chosen details to clarify what exactly changed hands:

Omnibus presens scriptum cernentibus ebbo wghæth sun¹⁵⁸
 Salutem in vero salutari. Constare volo tam presentibus quam
 futuris, quod ego venerabili patri domino Es. ripensi episcopo
 vendidi omnia bona que habui in rorkiar, videlicet tria attingh jn
 exing march cum molendino et pascuis et omnibus attinenciis jure
 perpetuo possidenda, pro quibus mihi centum marchas denariorum
 vsualis monete soluit ad meam voluntatem.¹⁵⁹

Present before all, written to viewers Ebbo Wghæth his greetings given in truth. I wish to correspond as with those present as those in future, that I sold to the venerable father lord bishop Esgar of Ribe all the goods which I had in Rorkiar, it is clear three *attingh* in Exing March with the mill and pastures and all the tenancies for possession in just perpetuity, for which he paid to me, willing, one hundred marks of *denarii* from the usual mint.

¹⁵⁸ Oluf Nielsen completes the “s.” of the manuscript as “sun,” which conforms to no Latin word. I take it to instead be the reflexive pronoun, whose accusative form would be “se,” but have included Nielsen’s edition for consistency; *Avia Ripensis*, 3v.

¹⁵⁹ *Samling af Adkomster*, 19.

Unlike many of the documents (such as the 1255 charter), this one bucks the trend of beginning with the name of the person making the grant. Additionally, Ebbo Wghæth is given no title or other details as the Danish kings are, however, a similar format is maintained, including the emphasis on the important role of the charter as a legal, written record. This same pattern is followed in the following charter, which confirms the transfer of land and attendant property by Ebbo's son.¹⁶⁰ While some of the enumerated goods are fairly clear in terms of what is transferred (if not how much – no mention is made of the number of tenancies transferred), what perhaps necessitates the most scrutiny is the *attingh* Ebbo transfers. This term is fully spelled out in the manuscript, reinforcing that it is not a common enough term to be abbreviated.¹⁶¹ Like many place and personal names (Ebbo Wghæth, Rorkiar, and Exing March in this individual document), it is not declined. This is likely because the term comes from the local vernacular, not Latin, and because it is likely derived from the indeclinable Old Norse word for eight, *átta* (with its ordinal form *átti*).¹⁶² This is consistent with the appearance of *átting* (pl. *áttingar*) in Swedish sources beginning around 1200. These were taxation units that correspond roughly to an eighth of the larger *hundare*, although in some cases the exact number of *átting* in a *hundare* might vary. They were not a small enough unit to distinguish individual villages, generally simply taking the name of the largest one within it.¹⁶³ While the charter may lack an extensive description of where in Exing March the three *attingh* were located, it uses the shorthand of existing administrative units (and Ebbo's ownership of them), to communicate the necessary information for this land transfer.

¹⁶⁰ *Samling af Adkomster*, 19-20; the charter is written from the position of Ebbo Wghæth's son; although not explicit as to why the document was necessary, this resolved any lingering questions of inheritance.

¹⁶¹ *Avia Ripensis*, 3v.

¹⁶² E.V. Gordon, *An Introduction to Old Norse* (Oxford: Oxford University Press, 1957), 292-3.

¹⁶³ Philip Line, *Kingship and State Formation in Sweden, 1130-1290* (Boston: Brill, 2007), 237-42.

The *atingh* the document refers to are not the only elements of human geography mentioned in this property transfer. Most prominent is the mill, which is the only specific structure noted in the transfer, indicating the unique worth of such a structure. This specificity returns to the accommodation for fields flooded by mills – while the reduction in land area (particularly arable land) was certainly a loss in value, the mill’s value justified the occupation of and payment for another person’s land. In addition to the mill, pastures also are specified, showing how land was separated by its usage and its sale needed to be discussed as an addendum to the *atingh*. If land transfers were assumed to include the associated buildings like the mill and lands not devoted to cultivation, there would have been no need to specify that these were included. The transfer of pastures also indicates that not all the land Ebbo owned was implied by the transfer of his *atingh*, and indeed many pastures may have fallen outside the administrative designations of the *atingh* at all. In such a case the outer property, while not a part of the codified organization of fields, still had enormous value and therefore needed to be mentioned explicitly when sold. The complex of various parties that controlled a region’s land provides additional context to situations like the 1255 agreement over compensation for a mill-pond – as gaining complete control over the entire region the mill threatened with flooding would have been prohibitive, the simpler method seems to have been to negotiate over compensation after the fact.¹⁶⁴ The final element of the enumerated *bona* is that of tenancies. Just as the *atingh* were a way to describe land based on socio-political structure, the transfer of tenancies represented an exchange of human capital. As much as buildings were transferred in the process, control over the labor to use them and the goods they produced was prioritized. Ebbo’s transfer is one of land, the large infrastructure project of a mill associated with it, and the people to work it.

¹⁶⁴ A thirteenth-century demonstration of the saying “better to ask forgiveness than permission.”

While all property had some value, some industries were considered to have more value, as seen already in the case of mills. A 1234 charter demonstrates how specific activities and infrastructure are especially valued:

Waldemar us dei gracia danorum slauorumque rex omnibus hoc scriptum cernentibus in perpetuum... duximus declarandum, nos domina episcopo ripensi assignasse pro dimidia fabrica, quam prius habuit in ciuitate ripens, censum aratorum in harthæsyslæ, almundsyslæ et warwithsyslæ cum opidis warwid et læmwich.¹⁶⁵

Waldemar, by grace of God king of danes and slavs, wrote this for all viewers forever... we make the declaration, that we assign to the lord bishop of Ribe in return for half a workshop, which previously he had in the city of Ribe, a wealth of plows in Harthæsyslæ, Almundsyslæ, and Warwithsyslæ with the towns Warwid and Læmwich.

This speaks volumes about the relative value of industries in the area of Ribe. Despite the value of land, as evidenced by negotiation for its occupation and control, it is traded in large (if non-specific) quantity in return for half of a workshop. Even power over two communities (and thus the manpower to work the land the bishop is acquiring) is less valuable than this workshop. It is unfortunate that the workshop is not specified, as this would help explain what kind of specialist skills are valuable enough to exchange for both land and control of the people to work it. Oluf Nielsen takes the *fabrica* to be a mint, although this is not specified in the text.¹⁶⁶ A mint is mentioned in the 1272 charter without the use of *fabrica*, further casting doubt on his assertion. As another possibility, excavations of Ribe from the height of the Viking period show a high number of beads produced as part of the local industries.¹⁶⁷ There is no certainty, however, that this product remained something characteristic of Ribe, that production ever rose above the level

¹⁶⁵ *Samling af Adkomster*, 5.

¹⁶⁶ *Samling af Adkomster*, x, 19.

¹⁶⁷ Jan Holme Andersen and Torben Sode, "The Glass Bead Material," in *Ribe Excavations 1970-76: Volume 6*, ed. Mogens Bencard and Helge Brinch Madsen (Højbjerg: Jutland Archaeological Society, 2010), 18.

of a cottage industry, or that this specific workshop was in any way related to it. While this leaves the value of both the land and the workshop uncertain, it still reiterates the importance of infrastructure, investment, and human skill in defining value. Land was not the only source of wealth for Ribe.

The way the land was transferred in this agreement is itself telling as to how land was imagined and used. The bishop received a “censum aratrorum” (“wealth of plows”) in this arrangement. This should not be taken to be just a grant of the physical plows, but power over the land worked by the plows and the people who used them.¹⁶⁸ That plows should stand in for the physical land they worked suggests an understanding of land based on human use. Nielsen summarizes the transaction as simply granting the dividends of a plow tax,¹⁶⁹ but this is also consistent with valuing a plot of land based on the human use of it. A land transfer quantified by the large number of plows used to farm it is in keeping with the numerous ways of expressing land area based on the labor needed to prepare or work it, both Classical and Medieval.¹⁷⁰ The choice to describe land by the plows it required to be farmed, rather than by a specific unit of land measurement, once more speaks to land divided by human presence, not by geographical area. It also communicates one of the primary ways in which land could be mapped, as there is no description of the land beyond the parishes in which it could be found. Instead, the land was defined by those who used it, and local knowledge would have played a key role in enforcing any claim. Oral history therefore was a supplement to the written text, although it is now beyond recovery. This is not to say that geographic landmarks played no role in translating the grant into

¹⁶⁸ The use of plows as a unit of land is seen more clearly in privileges from other texts, where it is discussed as a grant of the land of a number of plows, rather than as a wealth of them; John Stevens, *The History of Ancient Abbeys, Monasteries, Hospitals, Cathedral and Collegiate Churches* (London: 1723)117-8.

¹⁶⁹ *Samling af Adkomster*, x.

¹⁷⁰ John Edwin Sandys, *A Companion to Latin Studies* (Cambridge: Cambridge University Press, 1910), 438.

reality, merely that it was believed there was no need to write down this information. These early charters served to testify to the transactions made, not to provide the sort of detailed inventory we might expect from a modern legal document. They seek therefore to give an evocative, if imprecise, visual impression of what was exchanged.

An extension of the mindset of quantifying land by its productivity or human uses is seen in the land records of Jamdorp parish (Jandrup Mark), written down in the first half of the fifteenth century.¹⁷¹ The section begins by listing the “prata habet Capitulum Ripense in pratis parochie jamdorp in warethsysel” (“meadows the Chapter of Ribe has in the meadows of Jamdorp parish in Warethsysel”).¹⁷² This account of fields is extensive, and has marked divisions into several sections, which vary in size from having one *plaustratum* owned by Ribe to seventeen in total, subdivided into a number of discrete entries. Each subsection sums up the total fields contained, and all told it comes to 154.¹⁷³ In some cases it provides more detail than just the name of the location, such as the first entry, which records “in longwong ij plaustrata intra fossatum orientale” (“in Longwong two *plaustrata* within the east boundary”).¹⁷⁴ The mention of the *fossatum* implies that defined ditches or at the very least boundary-marks existed for the land, but this opens up an interesting question. No mention was made of such boundaries when discussing the *pascuis* of Rorkiar, but it is entirely possible the same sort of fences existed in 1234, and the author felt no need to record them within the charter as opposed to this more detailed account. In either case, less ambiguity is being left in these later records.

¹⁷¹ *Samling af Adkomster*, xix.

¹⁷² *Samling af Adkomster*, 50.

¹⁷³ *Avia Ripensis*, 9r; *Samling af Adkomster*, 51; the minimum and maximum owned land refers to Beekmetæ and Skreedeland, respectively.

¹⁷⁴ *Samling af Adkomster*, 50.

As for the quantity of land, this is complicated by the unit used to describe it – the *plaustratum*. The *plaustratum* is generally used as an approximation of a specific size of wagonload, denoting the amount of produce (presumably meat or animal products more generally) expected from the land. It was, aptly enough, quantified as a number of “pigs,” albeit the metal ingot, not a type of livestock.¹⁷⁵ While what specific products should be expected in a given *plaustratum* are not specified, it was an appropriate unit to measure raw amounts of animals, meat, or secondary products coming from pastures. In contrast to using the plows needed to work the land, by the fifteenth century land transitioned from being described by how it was used to the value of its material produce. This still reflects how the land was understood primarily in terms of its return value, not area – there is no reason to believe that a *plaustratum* of land in one part of Jamdorp contained the same number of square meters of land as a *plaustratum* in another. A modern understanding of geography, built around demarcated areas on a map and measured as such, is insufficient to describe the information prioritized in this kind of geography, land bounded by locally-understood features and whose area was measured in the value extracted from it. There is perhaps a comparison to be drawn here to the challenges of applying maps of indigenous land use to more “conventional” maps, as the priorities for how information is expressed differ so greatly.¹⁷⁶ This should not be taken to mean that the physical geography of the land did not matter, as pasture land was valued based on the amount of goods it could produce and measured appropriately for those products, not a value of currency derived from their sale. It does mean, however, that in cases where no boundary-lines survive, and where

¹⁷⁵ “Plaustrata,” Logeion, accessed July 16, 2020, <https://logeion.uchicago.edu/plaustrata> and John Langdon, “Horse Hauling: A Revolution in Vehicle Transport in Twelfth-Century England?” *Past & Present* no. 103 (May 1984): 57; for its quantification as pigs, “Measures and Weights,” in *Dictionary of Political Economy, Volume 2*, ed. Robert Harry Inglis Palgrave (London: Macmillan and Co., Ltd, 1896), 719.

¹⁷⁶ Hugh Brody, *Maps & Dreams* (Long Grove: Waveland Press, Inc., 1981), 87, 153-74.

the oral knowledge is in no way preserved (such knowledge, if only preserved in a limited capacity, can be seen in the *Annales*' tale of Redwin and Ethelerus and their exploitation of a local resource), a true reconstruction of how these values translated into areas of land cannot be made.

Pastures, however, were not the only land owned by the cathedral chapter in the area of Jamdorp. Following the description of the pastures, the *Avia* begins its next entries with “Hic specificantur agri Capituli Ripensis in Campo jamdorp siti” (“Here are stated the fields of the Chapter of Ribe sitting in the Jamdorp plain”).¹⁷⁷ The following records are not divided as rigorously as the pastures, and although Nielsen splits the section into two blocks of text in the edition, no clear divisions are marked in the manuscript itself. The initial note identifying these holdings as *agri* is not the only way to distinguish what kind of land is being described, as none of the holdings are valued in *plaustrata*, but rather in *modii* and *solidi*.¹⁷⁸ The *modius* is a standard measure of grain, sometimes translated as a “peck.”¹⁷⁹ This is an apt unit of measure to describe the products coming from fields, particularly if they were regularly planted with grain. It preserves the pattern seen with the *plaustrata* being used to describe units of land from the pastures, in which land is described by location and productivity, not the physical extent of land. Interspersed among the *modii* of agricultural land are holdings valued in *solidi*, a measure of value in currency.¹⁸⁰ This complicates a simple model of property measured purely by the profit it returns in kind. Is this a case where the crops grown are variable, so the land is valued in an average monetary return? Perhaps, but this may also reflect how the land was acquired and

¹⁷⁷ *Samling af Adkomster*, 51.

¹⁷⁸ *Avia Ripensis*, 9v; *Samling af Adkomster*, 52.

¹⁷⁹ “Modius,” Logeion, accessed August 19, 2020, <https://logeion.uchicago.edu/modius>.

¹⁸⁰ “Solidus,” Logeion, accessed August 19, 2020, <https://logeion.uchicago.edu/solidus>.

managed. In each location, the list separates each *solidus* worth of land.¹⁸¹ This amount may then represent a standard rent for tenants, or how land was donated piecemeal to the chapter and recorded with these divisions intact. Furthermore, it is important to note that this represents only a snapshot of the land's value. If some portion was controlled by the chapter itself, and the rest rented out on a *solidus-by-solidus* basis, the text describes only how Jamdorp's value was recorded and the conditions in the year this register was composed.

The description of these fields also hints at how they were defined based on features of the landscape. This is illustrated in the list of fields around Hyldwang:

Item in hyldwang j solidus, item j solidus in eodem, jtem j solidus in eodem, jtem iij modii in eodem, jtem iij modii in eodem, jtem iij modii in eodem, jtem vj modii in eodem apud paludem.¹⁸²

Also in Hyldwang one *solidus*, also one *solidus* in the same, also one *solidus* in the same, also three *modii* in the same, also three *modii* in the same, also three *modii* in the same, also six *modii* in the same near the wetland.

Sections of the fields are listed off with no distinction, in this case beginning with those valued in *solidi* (although this is not a consistent pattern by any means). This engenders the question of why it was necessary to include the position of the final set of fields. It is certainly not the size of this particular field or set of fields; six *modii* in Bywang are listed without detail.¹⁸³ It could simply be an artifact of how it was surveyed, but it may also represent a condition that is seen to have an impact on its value or use. As we have seen in both the *Annales Stadenses* and the *Chronicon Werumensium*, flooding and environmental hazards emerge from wetlands (and human dangers may reside there as well), so the inclusion of the detail concerning proximity to wetland may have marked land more prone to flooding and thus less reliable in terms of yield.

¹⁸¹ *Samling af Adkomster*, 52.

¹⁸² *Samling af Adkomster*, 52.

¹⁸³ *Samling af Adkomster*, 52.

This would fit with the added detail of the *fossatum* (boundary or ditch) some of Longwong's pastures fell within. Just as it was important to know which pastures fell within the comparative safety of even modest boundaries, it was important to know which fields might be endangered by their surroundings.

Both instances also suggest where the land falls with respect to its community – Longwong's pastures are within the community's boundaries, and so nearer to the community, while Hyldwang's fields are near the wetlands, potentially the outskirts of the community (or at least the outskirts of the farmed or otherwise anthropogenic environment). The extremes of placement are also seen in some other fields, such as those in Mooldheeth "iuxta finem orientalem"¹⁸⁴ ("near to the eastern edge"). Detail is also given for fields notably close-by, such as in Neethhenbrød, where there are "ij modius in ij locis iuxta ecclesiam"¹⁸⁵ ("two *modii* in two places near to the church"). Fields near the local church would mean shorter travel time for workers from the church or its associated community, easier observation of tenants (and working in the sight of the church might have put pressure on tenants to behave well), and less cost to transport goods. Ease of access has a value all its own.

Attaching value to land is a complex process, and it was done in the *Avia* with varying levels of precision and types of units depending on context. In some cases, the land was defined by existing administrative boundaries or by the scale of human labor needed to work it. These transactions depended upon unwritten local knowledge to understand how ownership mapped onto the landscape. While land was valuable, a half-share of a workshop could equal quite a bit of it, reflecting the importance of specific forms of labor. Later portions of the text, seeking to

¹⁸⁴ *Samling af Adkomster*, 52.

¹⁸⁵ *Samling af Adkomster*, 52; *Avia Ripensis*, 9v; Nielsen's transcription completes the abbreviation "mod" found in the manuscript. Nielsen does not always identify whether the term should be singular or plural correctly.

record the cathedral chapter's property, valued land by its productivity, using measures appropriate to the land's use. On occasion, additional information was provided, with the seeming purpose of supplementing a simple value assessment with crucial detail, as raw yield was not always sufficient information to convey a piece of land's worth. All of these systems of land valuation coexisted, each reflecting land use and serving the purposes of one of the varied documents that make up the text.

Changing Landscapes

With each of the four broad sections of the text, specific kinds of information and documents are combined. Of these four, the third is where descriptions of the prebends are contained.¹⁸⁶ The prebends demonstrate once again the process of quantifying land value. Perhaps more so than any other section of the *Avia Ripensis*, the space allotted to the prebends is organized to allow for an enormous expansion of both their description and an increase in their number, which is itself indicative of how the future of Ribe's diocese was imagined and would play out.

The records of the prebends were designed for growth. Each side of the folio contains two columns, one for each prebend, including all property assigned to it; the prebends have been numbered by a separate hand.¹⁸⁷ Prior to the numbering, each column's contents are identified by the first line, as all but the first and last prebend start with the phrase "Ad prebendam simplicem/communem" ("to the communal/simple prebend"), and continue on to specify where the prebend sat or who held it.¹⁸⁸ The first page of prebends begins with a short introduction to

¹⁸⁶ *Samling af Adkomster*, iii.

¹⁸⁷ *Avia Ripensis*, 15r-20r.

¹⁸⁸ *Samling af Adkomster*, 60-70.

the section's purpose, written in the same hand that wrote the starting lines for prebends 2-21. It marks the year of initial composition as 1291, noting 21 prebends of two types (*simplex* versus *communis*). The second prebend contains multiple short sections, each in a different hand. Here the organization of the prebends in the document is on display, as these addendums to the prebend could not have been planned for – a later addendum is dated to 1404, over a century after the list's initial composition.¹⁸⁹ In addition, the final page of the section detailed a twenty-second prebend. In recognition of the section's initial description, this final prebend begins with “Bona per dominum laurencium jonæs son ad fundacionem noue prebende Ripis deputata” (“Goods via Lord Laurence Jonæsson allotted for the foundation of a new prebend of Ribe”).¹⁹⁰ This later addition took advantage of spare space in the text (the second column of 20r, and 20v was left open for presumably the same purpose) to continue this expected process of the expansion of Ribe's wealth in the form of its prebends. The list may specify the holder of the title at the time of composition, but the large space left below the prebend allowed it to grow over time, and it is in the list of various goods allocated to each that the prebends vary greatly.

Not only do the prebends differ in terms of how much they received, but they also differ based on how their allocated property is described. Prebend 13 contains a later list of holdings reminiscent of Jamdorp's long list of property, including each allotment of “terre trium modiorum” (“land of three *modii*” – the number of *modii* is highly variable) or “solidus terrarum” (“*solidus* of land” – there are also half-*solidi* in the list) It also introduces another unit of yield measurement, quantifying land with the unit “lagena terrarium” (“*lagena* of land”).¹⁹¹ A lagena, often translated to “gallon,” refers to a unit of set liquid volume (or the container used to

¹⁸⁹ *Avia Ripensis*, 15r; *Samling af Adkomster*, 60-70.

¹⁹⁰ *Samling af Adkomster*, 70.

¹⁹¹ *Samling af Adkomster*, 66.

hold it).¹⁹² Much as with the *plaustrata*, there is no specificity as to what goods are covered by this unit – milk, reflecting how *plaustrata* is not used here for pasture land (and its secondary products), or perhaps alcohol? This ambiguity as to what land is or what form its value comes in is not always present, as prebend 7, written by the list’s first author, provides perhaps the most detailed information on one property in the entire manuscript. In it is detailed property in Wæstærth, where “vbi sunt quator domus, iiij boues, iiij vacce, xij oues, ij eque. De quibus soluuntur iiij solidi siliginis vel parum vltra cum lacticiniis et cetera”¹⁹³ (“there are four buildings, four bulls, four cows, twelve sheep, and 2 horses. From which four *solidi* are owed of wheat or milk and other [goods]”). Importantly, this demonstrates how even property where payment is measured in *solidi* could still be paid in kind.

The prebend provides the detail on another holding in Crakæbiargh, which had four bulls, three cows, twenty sheep, and twelve goats. The holding had the same expected payment of four *solidi*, similarly paid in kind. The prebend also includes dividends from a local mill.¹⁹⁴ The variance in detail represents not just different authors, but the changing priorities as the document developed. For the initial author, this property was a significant portion of prebend 7, and each holding had comparatively high value. In addition, the author took care to name the current holder of the prebends, even in those with no allocated property listed.¹⁹⁵ By the time of some of the later additions to the prebends, the size of newly allocated property grew. For example, the aforementioned prebend 13 came to include seven *solidi*, seven *modii*, and fourteen *lagenae* worth of land.¹⁹⁶ It is hard to imagine the number of specific livestock on each property

¹⁹² “Lagena,” Logeion, accessed August 19, 2020, <https://logeion.uchicago.edu/lagena>.

¹⁹³ *Samling af Adkomster*, 63.

¹⁹⁴ *Samling af Adkomster*, 63.

¹⁹⁵ *Samling af Adkomster*, 60-70.

¹⁹⁶ *Samling af Adkomster*, 66.

seemed quite as important with so many properties to track. Just as a lack of concern for individual properties may have been a factor, so too would have been concerns for space on the page – if this level of detail was applied to the list of Prebend 13, the sole column devoted to it would not have sufficed. As Ribe’s properties expanded, its attention to detailed records for individual properties faded in importance.

The growth of the prebends as recorded by the documents was a process that never reached completion, based on how it took up space in the *Avia*. The second prebend on the list may have received numerous additions into the fifteenth century, but others did not experience that long-term growth. Prebends 4, 11, 18, and 20 not only had no goods assigned to them by the initial writer (most prebends had a list written in this initial hand), but had no addendums at a later time. This leaves a rather pitiable list for some prebends, marking a whole column to fill with property allocated “to the prebend” which was never populated. In addition, no prebend’s description extends beyond the half-way point of the page.¹⁹⁷ The prebends set out an expectation of growth for each prebend, one to be filled in over years to come. The coming centuries would not be kind to these expectations, delivering disease, floods, and finally religious reformation to interfere with this plan.

In addition to the prebends, the *Avia* contains a list of all the churches in the diocese. The extended list is organized by the larger *sysæl* and then by the constituent *hæreth*, listing each church and the revenue from it in *solidi*.¹⁹⁸ Sadly, neither the original writer nor the later hand that added many additional dates saw fit to indicate when this list was produced, although it must

¹⁹⁷ *Avia Ripensis*, 15r-20r.

¹⁹⁸ *Samling af Adkomster*, 108-13; for a discussion of this breakdown of Danish land, seen in King Valdemar’s Survey by the mid-twelfth century, see Hans Jacob Orning and Bjørn Poulsen, “Holding Royal Office and the Creation and Consolidation of the Elites in Scandinavia c. 1050-1250,” in *Nordic Elites in Transition, c. 1050-1250, Volume I: Material Resources*, ed. Bjørn Poulsen, Helle Vogt, and Jón Viðar Sigurðsson (New York: Routledge, 2019), 233.

have come before the entry dated to 1434 that fills much of a second column on 30v.¹⁹⁹ The list was amended later, and it provides an excellent opportunity to see how changes were handled over time. The marks next to the entries for individual churches on the list, with one exception, note churches no longer in operation as *desolata*.²⁰⁰ The cause is not explained, but the abandonment is spread across the parishes of the diocese – ten *hæreth* and the area of Ribe itself have at least one church marked *desolata*, and Jællingsysæl, with no separation into *hæreth* and 31 churches, lost three, the most of any location on the list. For this reason, Nielson felt safe in the assumption that the Black Death was the most likely explanation.²⁰¹

This theory may also explain the one unique annotation made for the Andæfliit church in Høthærshæreth, which is marked as *submersa*.²⁰² The coming of the 1362 Grote Mandrenke soon after the Black Death would mean any church lost in that flood and not recovered would also be marked in this update to the list. That only one lost church is due to the 1362 flood might be surprising, given the flood's impressive list of damages, but it is important to note that while Ribe sat within the northern bounds of the WSC (see figure 1), the diocese of Schleswig sitting to its south meant much of the diocese spread out of the WSC to the north and the east. It reached in places all the way across the peninsula, even incorporating Jelling and its surroundings on the east coast of Jutland (ironically, a site representing Denmark's acceptance of Christianity ended up on the distant margins of its diocese).²⁰³ This further demonstrates how the diocese of Ribe changed beyond the WSC. Only Høthærshæreth was struck by flooding, and it was one of very few *hæreth* largely within the WSC, sitting south of Ribe and near the

¹⁹⁹ *Avia Ripensis*, 30v.

²⁰⁰ *Samling af Adkomster*, 108-13.

²⁰¹ *Samling af Adkomster*, vii-viii.

²⁰² *Samling af Adkomster*, 108.

²⁰³ *Samling af Adkomster*, 109; see figure 1.

coastline.²⁰⁴ Not only was flooding, to little surprise, not seen as a cause of abandonment on these inland churches, but the same is seen in coastal settlements within the diocese but outside the WSC. No church in this large area was labeled *submersa*, only *desolata*. The importance of floods and flood prevention seen in other texts from the WSC is reflected in Ribe's cartulary, while its lesser impact outside the region is also on display.

But this is only the start of the story. Beyond being marked as abandoned, nothing else is changed in the record. The various authors of the *Avia* had no compunctions about crossing out records, from the “x” over the 1434 document found in the column next to the list's end (see figure 4), to the furious lines crossing out a significant portion of 25v, to the simple “x” crossing the whole of 24v.²⁰⁵ Yet these abandoned churches are simply noted to be *desolata*, and are not crossed out. Moreover, the revenues listed beside each church are similarly respected – they are not updated to reflect changing productivity, providing information neither on the loss in revenue from the surviving churches nor the re-allocation of land and people once belonging to the now-abandoned churches.²⁰⁶ Quite unlike the prebends, seemingly expected to grow and be updated, this list is treated as an ideal status quo, to which a future writer merely sought to mark where the passage of time struck the hardest. The process of “technological lock-in” has been remarked on before, where a program of land management becomes increasingly costly, burdening the society with an ever-growing upkeep that prevented the exploration of new solutions.²⁰⁷ This document shows the human side of this process, where the established churches are treated as a natural feature of Denmark's anthropogenic landscape, and one to be maintained rather than changed.

²⁰⁴ The medieval village of Høthær came to be known as the modern community of Højer – “Danmarks Købstæder: Højer,” accessed August 19, 2020, <http://ddb.byhistorie.dk/kobstaeder/by.aspx?koebstadID=99>; see figure 1.

²⁰⁵ *Avia Ripensis*, 24v, 25v, 30v.

²⁰⁶ *Avia Ripensis*, 29v-30v.

²⁰⁷ Mark Elvin and Su Ninghu, “Man Against the Sea: Natural and Anthropogenic Factors in the Changing Morphology of Hargzhou Bay, circa 1000-1800,” *Environment and History* 1, no. 1 (February 1995): 44; TeBrake, “Hydraulic Engineering in the Netherlands during the Middle Ages,” 116-7.

Total loss alone required extra notation, because it forced a reevaluation of whether the parish system would ever again resume “normal” operation.

The 1291 list of prebends left a large amount of space open, a canvas which the growing bishopric would presumably fill. While lists of additional properties allocated to individual prebends were attached, much of this space remained blank by the time the *Avia Ripensis* fell out of use. While the prebends expected future growth, the list of church revenues reflected a snapshot in time, one that would have been hard to reconcile with contemporary conditions only a few decades later. The attempt to reconcile, merely marking those churches that had been abandoned and one lost to flooding, shows a need to visualize this change, but discomfort with fully recognizing its impact or finality.

Conclusion

Charters serve as a way to find traces of how people experienced the landscape, particularly of those who did not leave more conventional literary evidence.²⁰⁸ Ribe’s diocese built its wealth on the control of both human and natural resources within its domain, a fact seen within the *Avia Ripensis*. Land was valued in cathedral records by what form of production took place, with *modii*, *plaustrata*, *lagenae*, and *solidi* all used where they were considered appropriate. While of substantial value, land needed to be worked to derive said value, and even then there were other businesses worth trading control of the land for. Establishing its boundaries relied upon a great deal of detailed local knowledge the text rarely sought to provide. When threatened by the formation of the newly-built royal mill’s pond, those boundaries were still

²⁰⁸ Nicholas Howe, “The Landscape of Anglo-Saxon England: Inherited, Invented, Imagined,” in *Inventing Medieval Landscapes: Senses of Place in Western Europe*, ed. John Howe and Michael Wolfe (Gainesville: University Press of Florida, 2002), 92; Howe applies this to charters of Anglo-Saxon England, but the principle is no less true here.

enforced, and the opportunity cost of flooded land had to be reckoned with by the king, even as the bishops eyed the new waters for economic opportunity.

As destructive as the floods of the thirteenth and fourteenth centuries were for the WSC, even combined with the Black Death's onslaught, the *Avia Ripensis* continued to add to its records through the fourteenth and fifteenth centuries.²⁰⁹ The text, and the community it documented, survived what many other communities did not. In a way, however, the very position that gave them some degree of safety from the vicissitudes of the WSC spelled their doom. The Ribe Å's estuary silted in over time, beginning to constrict trade by the seventeenth century, and while the city was rebuilt (often using the rubble from old buildings), it suffered greatly from flooding and fires in the same period. Combined with growing ship size and harbor space demands, the increasingly less navigable Ribe Å undermined the city's position as a local center of trade.²¹⁰ As for the diocese of Ribe, the Reformation would deal it a critical blow, with episcopal property confiscated by the crown in 1536.²¹¹ For all that, the town still bears the traces of its history of land use, from its streets tracing a route the mill's dams created to the cathedral which looks out across the tidal flats to the Wadden Sea beyond.

²⁰⁹ *Samling af Adkomster*, xviii.

²¹⁰ Stig et. al., "Detection of terrain changes in southern Denmark using persistent scatter interferometry," 43; Dorthe Dangvard Pedersen, Peter Tarp, Morten Søvsø, Hans Christian Petersen, George Robert Milner, Jesper Lier Boldsen, "A millennium of population change in pre-modern Danish Ribe," *Anthropologischer Anzeiger – Journal of Biological and Clinical Anthropology* (August 2019): 4, <https://doi.org/10.1127/anthranz/2019/0952>; Ayers, *The German Ocean*, 69.

²¹¹ Martin Schwarz Lausten, *A Church History of Denmark*, trans. Frederick H. Cryer (Routledge: New York, 2002), 109-10.

FINAL THOUGHTS

The Middle Ages was a time of great change for the Wadden Sea Coast. Construction of dikes and water management projects reshaped the landscape, draining the wetlands and dividing human “places” from natural “spaces.” Such projects were necessary in an environment dominated by wetlands that promised bounty for those prepared to exploit them but were hostile to the unprepared. That hostility is exemplified in no better way than the flooding that was an ever-present danger along the WSC. The value seen in the WSC’s land could be either extracted by those with the knowledge to use it, or accessed by altering the land through dams, dikes, or clearance. This value was quantified based on the form it took, be it fields, pastures, or wilderness. Even the watery environment so often treated as a threat served as a source of resources. The struggle to make a living out of this terrain was as much the effort to derive value from the environment as it was to keep natural forces at bay.

Not all the conclusions of this project are as definitive as they could be. As noted throughout, the human-environment relationships presented in these texts are colored by the author’s biases and personal interests. This project has only scratched the surface of what the Wadden Sea Coast has to offer, and there is much left to discover both within the written records and hidden amongst the tidal flats of the region itself. Most enticing would be further evidence of the movement of settlers that brought with them the skills needed to exploit the wetlands of the WSC, including the elusive records of the 1113 effort by the archbishop of Hamburg-Bremen to encourage settlement and drainage by Dutch settlers.²¹² Additional historical narratives would

²¹² Bas van Bavel, *Manors and Markets: Economy and Society in the Low Countries, 500-1600* (New York: Oxford University Press Inc., 2010), 40-1; van Bavel fails to provide where this information comes from; he is not alone in this failure.

provide more of a representative sample, especially if further sources can reach beyond the ecclesiastical sources presented here. Furthermore, comparative analysis of material from outside the WSC would clarify which attitudes and behaviors are unique to the region. As noted in the discussion of the *Avia Ripensis*, a great deal of valuable information on land use patterns would have been contained in local knowledge. While some is inevitably lost, other sources, including post-medieval records and archaeological work, may contain some clues as to the information not found in medieval texts.

As a UNESCO world heritage site, the Wadden Sea's future must be envisioned both as a natural environment and a landscape indelibly marked by human manipulation of land and water. Planning its future requires understanding this history of human activity, and the decision-making processes – both those of rulers and their subjects – that drove the changes in this landscape. It demands that we recognize that the medieval development of flood defenses became a necessity in order to maintain the lifeways of those who built them, and that the human presence in the WSC was enabled, but also limited, by these projects. With three nations now managing the WSC, the region's future relies upon a shared understanding of its past and the fostering of a shared sense of responsibility for its stewardship.

Many of the lessons the medieval Waddenland has to teach us are sobering, especially those about the dangers of unintended consequences. The first Norse merchant trading at Ribe could hardly have known how a king's mill would make his trading site obsolete, just as the king in question could only respond to the consequences of the mill's flooding. None of them could have known that the same winding river that gave the city life would eventually cut it off from the sea upon which it also depended. On a similar note, the first farmer to begin drainage of a peat bog in the Low Countries could not have envisioned the land subsidence that would

necessitate the diking of the entire region. Under a process of “technological lock-in,” the infrastructure, once created, forced the people of the WSC to continue the investment over decades and centuries, preserving socioeconomic systems even as the cost of their maintenance grew ever higher.

Today, we face environmental challenges that have been posed by how we live our lives. Large coastal populations are threatened by sea level rises, a result of Anthropogenic Climate Change. Fossil fuel consumption is bound to our energy and transportation industry, a “technological lock-in” of the modern world. Responding to this developing crisis will likely be one of the primary challenges of the twenty-first century.²¹³ Our histories will similarly tell of leaders like the abbot of Wittewierum who drove construction of needed defenses against damaging forces of nature, and of the loss of lives from those who did not follow such advice. Ongoing insistence that our systems will continue to operate as they always have, the unconscious following of our own “technological lock-in,” may have similar consequences. If we are unprepared, a modern list of cities may be marked up in a century’s time with “abandoned” and “submerged,” a testament to our failure to mitigate the coming changes.

²¹³ Bill McKibben, *Eaarth: Making a Life on a Tough New Planet* (New York: Times Books, 2010), 47-53.

APPENDIX

Glossary

A short list of terms used in the text, which may either be unfamiliar to readers or require some added explanation for choice of translation.

Agger(-es) – While it can refer to ramparts or earthworks in general, in the context of water management it refers to a dike system.²¹⁴ As this is the only context the word is used in here, it is translated as “dike.”

Casa(-e) – While it can be used for a house or even an estate, this term’s general definition is as a hut, cabin, or shed.²¹⁵ It therefore refers to agricultural outbuildings, which in this case appear to be “field houses,” structures built to support a temporary or seasonal need for housing, storage, and work space. They can still be seen today in areas that follow traditional agricultural practices, as well as being tentatively identified at some archaeological sites as far afield as the American Southwest.²¹⁶ Evidence for such structures is important to note, because despite the ubiquity of temporary structures in any human-altered landscape, they also have a tendency to disappear.²¹⁷

Palus(-udis) – Terms like “swamp” are evocative, but they have technical definitions (a swamp is a “wetland dominated by woody plants,” a specific ecology).²¹⁸ As there is a great deal

²¹⁴ “Agger,” Logeion, accessed September 14, 2020, <https://logeion.uchicago.edu/agger>.

²¹⁵ “Casa,” Logeion, accessed October 9, 2020, <https://logeion.uchicago.edu/casa>.

²¹⁶ Altschul, Thiaw, and Wait, *A Slave who would be King*, 292; Robert E. Gasser, “Seeds, Seasons, and Ecosystems: Sedentary Hohokam Groups in the Papagueria,” *Kiva* 75, no. 2 (Winter 2009): 237.

²¹⁷ Stephen Straight and Myles Mustoe, “Temporary Buildings: Where are they going, where have they been?” *Journal of Geography* 95, no. 2 (1996): 73,9.

²¹⁸ “Classification and Types of Wetlands,” United States Environmental Protection Agency, accessed August 27, 2020, <https://www.epa.gov/wetlands/classification-and-types-wetlands#bogs>.

of ambiguity as to what form of wetland is attested to, and *palus* can be applied to any of these biomes,²¹⁹ “wetland” is used when translating *palus*. “Marshy” is used to translate the adjectival form of *palus*, *paludosus* (as “wetlandy” is not a word).

Peat Bog – A type of wetland prominent in the Wadden Sea Coast area. Ditches cut through the peat bogs, along with embankments against undrained sections, drained the bogs, allowing them to be used as arable land. As bogs can be up to ninety percent water, once drained the surface level can drop dramatically.²²⁰ Turned into arable land or cut for use as fuel, peat bogs that took millennia to form were devastated across Europe, with no easy path to recovery.²²¹

Polders – Groupings of land holdings that subsided reasonably consistently, which made them convenient units for organizing drainage and the maintenance of water infrastructure. Much of the Low Countries would be organized into them by the fifteenth century.²²²

Terpen – Settlement sites in the Low Countries intentionally built up over decades and centuries by the deposition of debris. Creation of higher surface levels allowed settlements and nearby fields to remain far drier than the surrounding landscape, which was crucial for very low-lying areas. Many *terpen* remained settled even after the surrounding land was enclosed.²²³

²¹⁹ “Palus,” Logeion, accessed September 14, 2020, <https://logeion.uchicago.edu/palus>.

²²⁰ TeBrake, “Hydraulic Engineering in the Netherlands During the Middle Ages,” 107.

²²¹ Paddy Woodworth, *Our Once and Future Planet* (Chicago: University of Chicago Press, 2013), 352-9.

²²² TeBrake, “Hydraulic Engineering in the Netherlands During the Middle Ages,” 115.

²²³ Lambert, *The Making of the Dutch Landscape*, 18-31.

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