



Introduction

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Conservation's Roots grew—pardon the pun—from the frustration that we, the editors, shared concerning the unawareness and simplistic narratives about preindustrial environmental history that circulate widely in popular and academic circles, despite the growing body of work in this field. To address at least some of this lack of awareness and oversimplification, *Conservation's Roots* presents twelve studies that explore how Europeans of premodern times, before about 1800 CE, managed the natural resources on which they depended.

Whereas earlier scholarly debates asked questions such as whether preindustrial peoples lived more in “harmony” with nature than we do, or whether they already exhibited domineering and destructive environmental tendencies, we show that while approaches varied, overall preindustrial management practices and polices reflect practicality and a desire to ensure the “sustainability” of natural resources. Further, we argue that using modern environmental concepts, such as conservation and sustainability, to write resource-focused history deepens our understanding of the interactions between humans and the natural world before the rise of modern industry. We contend that these concepts force us to reconsider the broader narratives of medieval and early modern European history and environmental history.

In this Introduction, we address some of the challenges that works on preindustrial environmental history must confront. We then explain the deeply rooted efforts to conserve and sustain such “uncultivated” or naturally regenerating resources as pastures, woodlands, wild game, fish, and fresh water itself. The Introduction also suggests that, while recent scholarship into sustainability and conservation within

preindustrial Europe has focused mostly on ideas and cultural history, *Conservation's Roots* enables a shift in focus to the various ways in which preindustrial peoples interacted with their environments to try to guarantee themselves the resources they sought.

Impediments to Investigating Preindustrial Sustainability

There are at least three major challenges that any historical research, especially in environmental topics, must face in periods before roughly 1800 CE: the first is a question of our own attitudes toward the “deep” past of the preindustrial era; the second concerns available sources; and, finally, the third is the challenge of terminology.

Ideological Misconceptions about Preindustrial European Environmental History

One of the greatest obstacles to preindustrial environmental history is ideological. As Andrew Shryock and Daniel Smail have recently pointed out, over the last generation, there has been a tendency among historians and others who study the past from the perspectives of the humanities and social sciences to focus on the recent past. We believe the same is true of environmental history. For example, in a survey of the articles published in the last five years (2015–19) in the premier North American journal *Environmental History*, there are only five pieces dedicated to the pre-1800 period; and of those five, only one concerns pre-1600 Europe. Partially, this is a result of publication patterns; it is worth noting that there are few environmental history articles published in such top-tier general premodern journals as the *Journal of Medieval and Early Modern Studies*. The reality is this: many preindustrial environmental history articles are published in journals with narrower foci, such as *Landscape Studies*, *Agricultural History*, and *Water History*, as well as edited collections and monographs. The unfortunate result is that other environmental historians do not see preindustrial studies, and the cycle continues. In addition, key concepts that we use in this volume, such as “sustainability” and “conservation,” are generally regarded as modern developments. As Shryock and Smail show, the focus on the more recent past narrows our historical perspective and, we believe, cripples our understanding of the whole human past, blocking from view patterns of change that have unfolded, as in

the case of the human–nature interactions implicated in the management of resources, over long expanses of time.¹

This emphasis on the more recent human past has, in turn, encouraged the persistence of a number of interrelated oversimplifications about past relations between humans and their environments. Such broad-brush generalizations are almost as numerous as the evidence to support them is weak. For example, some writers have suggested that long before the rise of industrialization, western cultures already evinced a domineering or “exploitative” attitude toward the natural world. In this view, the “seeds” of current environmental problems were sown as early as the Book of Genesis, which gave humans “dominion” over nature. Lynn White Jr., who proposed this dubious hypothesis in 1967, went on to argue that although western culture’s environmentally destructive potential was implanted early on, it only gradually manifested, first becoming noticeable during Europe’s medieval economic expansion, and then finally emerging more fully with the seventeenth-century Scientific Revolution and the eighteenth- and nineteenth-century Industrial Revolution.²

Subsequent scholars have largely abandoned White’s “dominion” theory, recognizing instead that a multiplicity of modes of thinking about and interacting with nature can be found in premodern times. Still, a tendency persists to assume a progression among such modes of thinking and acting. David J. Herlihy suggested that an early medieval fear of nature as a hostile force gradually gave way by the Central Middle Ages (ca. 1000–1300 CE) to greater confidence in the human ability to shape nature positively, before the crises of the Late Middle Ages (1300–1500 CE) returned western cultures to a predominantly fearful mode.³ Positing a prevailing mentality to entire historical periods oversimplifies preindustrial interactions with the natural world. Scholars such as Ellen Arnold and Paolo Squatriti have persuasively argued that early medieval peoples were not unequivocally afraid of nature; they could—and did—harness environment narratives for political gain.⁴ Furthermore, as Richard Unger has noted, these “stage” theories leave in place the related assumption that White’s thesis exemplified in that “some essential feature of Western thinking created the precondition for an assault on the natural world.”⁵

In a similar vein, many scholars and members of the public continue to believe that in the distant past, before the emergence of modern science and industry, people coexisted peacefully with nature. Steeped in a strain of nostalgia endemic to environmental history, declensionist

views of nature cast humans as agents of unrelenting, cumulative environmental destruction and past human interactions with nature as inherently less destructive and selfish. This “arcadian” view of nature, as Donald Worster called it, was popular in literature and art from the late eighteenth century on and was picked up by the early environmental movement of the mid-twentieth century.⁶

Declensionist narratives also lean heavily on modern definitions of environmental crisis, which, as Richard Hoffmann has pointed out, neither reflect the complexity of environmental change nor adequately account for the historical realities of premodern management and scarcity.⁷ Although cataclysmic events grab and hold our attention, they may not reflect historical responses to change. As Paolo Squatriti has written, “some of the most celebrated monographs of environmental history adopt a chiding tone and use past cataclysms as the rods with which to chastise profligate and environmentally callous people today.”⁸ Further, such approaches set up an unproductive dichotomy that sees humans as either “Nature’s rulers or victims.”⁹

Closely related to declensionist narratives are romanticized views that a pristine form of nature or “wilderness” existed in the preindustrial past. The hope that we can stem the tide of ecological degradation by searching such a past for solutions is intimately tied to modern environmentalist movements.¹⁰ These views are relevant to this volume because of an enduring popular belief that preindustrial peoples could not use “marginal” or “waste” landscapes effectively or even avoided them altogether, which has been thoroughly debunked.¹¹ For example, while beginning in the seventeenth century, reformers considered many heathlands as mismanaged, degraded environments, Maïka de Keyzer’s chapter shows that these judgments often bore little relation to local realities.

Moreover, there is a link between views of preindustrial management practices as being either harmonious or insufficiently adaptive and colonialism. As Emmanuel Kreike explains, there is still a tendency to assume that “Western or ‘modern’ people” actively change nature, in contrast to “non-Western or ‘premodern’ peoples,” who live within “the realm of Nature.”¹² Such ideas enable views of premodern natural resource management as less complex, less exploitative, or less useful than modern, colonial, or capitalist modes of management. The contributors to this volume emphasize the practices, behaviors, and policies relating to environmental interaction in European populations themselves, thereby complementing scholarly attention to the

environmental dimensions of European colonialism and overseas interactions.¹³

Sources: An Embarrassment of Riches

While scholars of preindustrial periods typically grapple with relatively limited sources, they are more abundant than is often assumed. Preindustrial Europe in the second millennium of the Common Era was not in any sense exceptional in the degree to which it valued or practiced the sustainable use of natural resources. Farmers the world over, for example, have long recognized and responded to the problem of maintaining soil fertility, whether by practicing shifting cultivation, crop-rotation, or manuring.¹⁴ But in our period, roughly 1100–1800 CE, sustainable practices are particularly well documented—much more so than might appear from perusing the current literature of environmental studies.

Most contributors to *Conservation's Roots* find supporting evidence for these sustainability-oriented practices in the rapidly accumulating results of landscape archaeology, historical ecology, and other paleo-scientific approaches to past environments.¹⁵ A few of the chapters incorporate paleo-scientific evidence more fully into their analyses, including Dolly Jørgensen's study of medieval pig-grazing and Péter Szabó's essay on traditional woodland management. Overall, however, our focus is on human artifacts, and especially written documents. The authors concentrate on documents that concern human uses of and impacts on nature, rather than on the literary, religious, or philosophical texts that illuminate cultural understandings of nature.¹⁶

In some regions, by the eighth century CE, surviving texts already include not only political and religious genres, like historical chronicles and saints' lives, but also many documents of practice, such as estate inventories, land deeds, and judicial decisions.¹⁷ In most parts of Europe, however, it is not until after about 1000 CE that the sources for the study of human interactions with nature improve greatly, both in quantity and quality. Such documents include land transactions (gifts, sales, exchanges, mortgages, etc.), judicial records (dispute settlements, arbitrations, inquests, marriage contracts, wills, post-mortem inventories, etc.), business dealings (partnerships, insurance contracts, receipts of sale, bank deposits, etc.), account books, charters of liberties, and tax rolls.¹⁸ Literacy expanded further from the fourteenth century, when paper began to replace more expensive parchment as a writing

tool, and then even more with the advent of widespread printing from about 1500 CE.¹⁹ All of these expansions in documentation and literacy over the last half-millennium or so of Europe's preindustrial era did not mean that most people could read and write well. Rather, these changes created conditions in which large numbers of people acquired at least the skills needed for "pragmatic literacy"—that is, the ability to understand and use written instruments well enough to help them in managing their affairs and in asserting their claims to property and resources.²⁰

Contributors Abigail P. Dowling and Sébastien Poublanc both provide a numerical accounting of the size of their respective archives and demonstrate the volume and detail of information available in this period. Dowling's research is based on samples from thousands of account books and receipts that have survived from a period of just twenty-seven years in the fourteenth century from thirteen different administrative districts in northeastern France. Poublanc, who studies the royal program of reform that was carried out between 1665 and 1685 in the forests of the southern French region of Languedoc, draws on an even more impressive archive, which includes "twenty-seven linear meters of archived material, comprising 2,000 court cases, 1,000 forest maps, and information about 1,623 forests."

Given this kind of abundance, it is not surprising that this book's contributors each focus on just a few types of sources. Many of the authors of *Conservation's Roots* concentrate on the decrees, regulations, and legislation issued by villages, towns, and larger territorial authorities. Prescriptive in character, these sources express goals, ideals, and what people should do, rather than trying to record what people actually did. Such rules and commands nonetheless provide us with a snapshot of what those who claimed the authority to issue them were trying to do. Furthermore, in the centuries under study here, there was as yet very little in the way of learned traditions of resource management—at least for "uncultivated" resources that reproduced on their own, like most woods, pastures, wild game, and aquatic resources. Decrees, authoritative plans, and legislation on these matters often lacked, therefore, learned models to imitate. Instead, they tended to promote guidelines that leaned heavily on customary or community standards of best practice, and thus may be said to reflect local common practice. Perhaps the best examples of this dependence are the fishing regulations studied by Richard Hoffmann and Michael Zeheter: these rules were so technically detailed, varied, and subject to small adjustments over time that both

authors argue persuasively that only the fishermen themselves could possibly have devised them.

Finally, we should note that in the agrarian world of preindustrial Europe, much of what was recorded in the above types of practical document inevitably concerns the usage of land and other natural resources. Scholars embarking on the exploration of these subjects do not have to start from scratch; they are able to build on long and continuing traditions of research on these sources by geographers, socioeconomic historians, and many others.²¹ In addition to demonstrating the complexity and diversity of preindustrial European resource practice, we hope that this volume will help to make the potential of this embarrassment of riches for environmental history somewhat more familiar.

The Challenge of Terminology in Early Environmental History

Terminology is also a challenge for preindustrial environmental history, because there is no fully satisfactory set of general terms with which to describe how preindustrial people understood and interacted with the natural world. While we could use such labels as “proto-ecological” or “proto-environmental,” one can call early ideas and efforts “environmental” only cautiously and as shorthand, given that this term had not yet acquired its modern meaning. Before the post-World War II rise of modern ecology and environmentalism, there was no unified and compelling way of thinking about the human relationship with the natural environment in its current, comprehensive sense.²²

Similarly, use of the terms “conservation” and “sustainability” for the preindustrial period requires caution. One approach that many historians have taken, and which is adopted here, is to use both terms with their broad contemporary meanings. These strongly overlap, with both terms sharing the core meaning, “to maintain something (or someone) in good condition.”²³ The two words also have, however, somewhat different implications. In current usage, “sustainability” is the more general term, referring to the capacity of humans to meet their needs over the long term, while maintaining the natural environment in as good condition as possible.²⁴ In contrast, “conservation” refers more specifically to “active management” to protect natural areas or to manage resources sustainably.²⁵

Although currently these terms may be used in similar ways across the globe, before about 1980, usage varied a great deal nationally and even regionally. Thus, many words in the environmental historian’s

lexicon still bear the legacy of these diverse traditions. In the nineteenth and early twentieth centuries in many northern European countries, the earliest movements to protect aspects of the natural world, such as British “preservation” or German “nature protection” (*Naturschutz*), were primarily cultural, aesthetic, and patriotic in focus, and had little or nothing to do with sustaining resources for economic use over the long term.²⁶ In contrast, the US “conservation” movement was based squarely on what Germans and other Europeans called the “sustained yield” management of natural resources.²⁷ This potential for confusion is lessened, however, by this book’s focus on the preindustrial period, before “nature protection” movements had emerged, and when instead an emphasis on something very much like “sustained yield” was widely shared.

Moreover, the terms “to sustain” and “to conserve” both have ancient origins in the Latin verbs *sustinere* and *conservare*,²⁸ and by the later Middle Ages, both these terms or their vernacular equivalents, at least in such Romance languages as French, could be used to refer to the management of natural resources.²⁹ Already by the late fifteenth and early sixteenth centuries, both the French and Spanish monarchies began issuing a series of edicts that mandated the “conservation” (French: *la conservation*; Spanish: *la conservación*) of forests, game, and aquatic resources.³⁰ By then, several other terms, many of them also derived from Latin,³¹ were even more commonly used for the protection and careful management of natural resources. For example, as Sébastien Poublanc discusses in his chapter, the early modern French state was keen on the idea of setting aside, or “reserving” (from classical Latin *reservare*), areas for the growth of timber: *la réserve*—a term and idea that had direct parallels in Venetia, in northern Italy.³² Further, as Sara Morrison shows in her chapter on Sherwood Forest, forms of the term “to preserve,” deriving from the medieval Latin *preservare*, were commonly used in early modern English laws that targeted the protection of woodlands. Finally, as several of this book’s chapters show, the protean term “forest” (medieval Latin *forestis*) was and still is found across Europe. Throughout the period covered by this book, many areas called “forests” continued to be managed under the special, natural-resources-oriented jurisdiction that rulers and lords claimed based on the medieval tradition of forest law.³³

Of course, the early use of terms like “conservation” or “forest” should not be assumed to suggest the existence of a broader social and intellectual campaign of conservation or sustainable management

analogous to those that began to develop from the mid-eighteenth and nineteenth centuries.³⁴ Rather, we suggest that using these terms in their broad senses is appropriate and helpful in highlighting conservative resource practices in preindustrial eras. Further, by using a shared set of terms, if not the ideological background to the concepts, we hope to better engage with other environmental scholars.

The Deep Roots of Conservation

Having been informed about the thefts and abuses committed in the waters and forests of our realm . . . which things constitute a great detriment and diminution of the public good . . . we have ordered a search of our accounting office for the ancient edicts concerning the reform, upkeep, and conservation of our waters and forests and also in the matter of hunting . . . and our counselors have found them to be very useful for the conservation of our forests. (Edict of King Francis I of France, March, 1515)³⁵

The quotation above is suggestive of the long tradition of environmental planning and regulation by lordships, villages, principalities, and states, which can be documented in detail as far back as the Central Middle Ages. One of this book's aims is to show that King Francis was correct to assert that such early efforts were indeed "useful for the conservation" of a wide range of natural resources, including woodlands, pastures, fresh water, fish, and wild game. We argue that the agreements, plans, orders, and regulations that record these efforts represent some of the earliest and most important sources for the practices that today we might refer to under such labels as "conservation" or "sustainable management."

The basic ideas underlying this argument are not new, even if claims similar to ours have traditionally focused only on some types of resources and have often been limited to one or a few specific regions or nations. But already in 1864, George P. Marsh noted that, at least for forests, efforts to preserve natural resources were widespread and had begun quite early: "The severe and even sanguinary legislation, by which some of the governments of mediaeval Europe . . . protected the woods, was dictated by a love of the chase, or the fear of a scarcity of fuel and timber. The laws of almost every European state more or less adequately secure the permanence of the forest."³⁶ Modern scholars

have often been hesitant, however, to accept these claims at face value. There is in fact some justification for this hesitation, especially when it comes to the ideas and intentions underlying these measures. For example, Clarence Glacken memorably suggested that these early regulations should not be understood even as “unwitting conservation.”³⁷ It is certainly true that early efforts to conserve resources usually had different goals from those of the more well-known projects of conservation or sustainable management that began to develop from about 1700 CE, when concerns grew that certain resources, especially woodlands, might be depleted on regional or national scales. These fears gradually led to a greater focus on the preservation of a particular resource in and of itself, which became a salient feature of the nineteenth-century movements of “conservation” and “sustained yield” management. Instead, most earlier conservation efforts were framed more narrowly. Typically lacking a broad approach to entire territories on regional or national scales, they aimed both to affirm the authority of lords, communities, and rulers and to safeguard the specific rights of those who used certain resources. Early plans and regulations often focused more on the rights of particular parties than on resources or territories.

Yet before dismissing these early measures too quickly on these grounds, it should be noted that they had implications and effects that frequently went beyond the protection of rights in the narrowest sense, in at least four ways. First, it is vital to remember that most preindustrial agrarian societies were, as Patricia Crone puts it, “dominated by scarcity.” Scarcity was a “hallmark” of such societies less because of any absolute, ecological limits on available resources than because of the typically low levels of productivity and very high degrees of socioeconomic inequality. Beggars and the truly indigent poor could easily account for up to 10 percent of the population, while up to half or more of the people in these societies often struggled, even in good years, to provide modest levels of food, fuel, clothing, and housing.³⁸ Yet outside infrequent but unfortunately recurrent episodes of famine, war, and epidemic disease, scarcity was experienced by most people as a routine but manageable fact of life, and mostly at the scales of the household, village, or local district. Both Maïka de Keyzer’s and Oliver Auge’s chapters provide particularly compelling examples of how people coped over the long term, often with at least some success, with acute scarcities of such resources as fertile soils and fuel. Scarcity also forced a long-term approach to the maintenance of natural resources even for elites. Abigail P. Dowling’s chapter follows the ways in which

elite estates, monuments to excess, also required careful management to assure the continuous supply of quotidian and luxury goods that supported aristocratic culture.

A second reason not to dismiss early conservation efforts is the fact that access to most resources was subdivided among many parties and concerned multiple, overlapping types of usage. As a practical matter, the safeguarding of rights often amounted, therefore, to the preservation of the resource itself. Even outside of lands managed explicitly as “commons,” a topic to which we shall return below, villagers often enjoyed some usage rights in the woodlands, pastures, and waters that lords claimed as parts of their domains. The chapters by Dolly Jørgensen and Richard Keyser document this type of layering of rights and usage early on in the medieval forests of Normandy and England. Péter Szabó’s chapter reveals that usage rights related to such traditional practices as coppicing and wood-pasture became so deeply ingrained that Czech woodlands actually evolved to fit them. Although these practices and the multiple-use approach fell out of favor under the influence of scientific forestry in the twentieth century, recent conservationists have begun efforts to restore them within what is now understood to represent a long process of coevolution.

Third, at least by the Late Middle Ages (ca. 1300–1500), many regulations to conserve resources began to be framed more broadly so that they were gradually applied to more and more extensive territories, whether at the level of the region, principality, or kingdom. Thus, in her chapter, Eva Jakobsson traces legislation to maintain the free-flowing character of Swedish rivers to the oldest surviving book in Swedish, the thirteenth-century *Regional Law of Västergötland*, which, as its names suggests, records the legal customs that in theory applied across this large region in south-central Sweden. By the seventeenth century, Swedish monarchs decreed that a similar principle should be applied to all of Sweden’s rivers. Similarly, Cristina Arrigoni Martelli details a centralizing trend in hunting regulations, which by the fifteenth century resulted in the replacement of dozens of local, municipal statutes by those of such regional powers as the duchies of Lombardy and Tuscany.

Finally, during this same period, justifications for regulating natural resources frequently went beyond narrow protections for the rights of specific parties to make claims about serving the “public good,” as seen, for example, in this section’s opening quotation. Beginning as early as the thirteenth century, this newly assertive approach to rule-making seems to have first targeted such problems as local flood control, urban

sanitation, and, as Richard Hoffmann's chapter shows in abundant detail, the safeguarding of fish stocks in "public" rivers and lakes.³⁹ Of course, this kind of ideological packaging, which clearly has political motivations, is by no means an essential criterion for sustainable management. Nonetheless, its prevalence suggests that interest in preserving resources was widespread.

Environmental historians have overlooked or tended to downplay the importance of much of the early evidence for conservation presented in this book. The problem with minimizing the central- and late-medieval phases of the development of sustainable management and resource conservation is not merely a matter of dating these phenomena. A more accurate chronology also affords us a better understanding of what motivated preindustrial conservation and the kinds of contexts in which it emerged. This chronology reveals that scholars have told only part of the story by focusing heavily, sometimes almost exclusively, on the familiar and eye-catching demands of early modern and nineteenth-century industries, metropolitan cities, powerful nation-states, early scientific investigations, and colonial enterprises. The evidence presented in this book shows that resource-conserving and sustainability-oriented plans and practices were much more deeply rooted and had more diffuse origins than these standard accounts would suggest.

A fuller history of preindustrial conservation and sustainable management must recognize the central importance of the needs of villages and relatively small urban centers for pasture, game, small wood, lumber, fish, and fresh water. Doing so would shift attention away from the warnings of scarcity and plans for action that elite administrators working near the centers of power began to issue from the late seventeenth century onward. This book argues instead that early conservation's most typical contexts were local lordships, various kinds of commons, and small principalities and emerging states. This is a crucial fact to grasp: preindustrial conservation and sustainable management emerged first and were most securely anchored at the local level. Although great lords and rulers and their educated administrators played important roles in expanding and enforcing the necessary rules, the customs and techniques on which the rules were based derived from local knowledge and were implemented primarily by villagers, wood-mongers, fishermen, merchants, and other nonelites. They worked to conserve and sustain resources within a broadly shared set of customary assumptions, which dictated that careful management was necessary in order to provide for human needs.

Preindustrial Conservation and Sustainable Management: More Than Ideas

Although some recent scholars have shown interest in the prehistory of the eighteenth- and nineteenth-century beginnings of modern conservation and sustainable management, so far, most research of this kind focusing on developments within Europe has concentrated on the cultural and intellectual history of the early modern period (ca. 1500–1800). This work offers important insights for understanding how natural resources were managed in the preindustrial period, even if it focuses less than we do on the kinds of evidence presented in this book.

The most prominent hypothesis for the origins of modern ideas about conservation or sustainability within preindustrial Europe traces these ideas to early modern forest administrations, and thus may for convenience be referred to as the “state forestry” model.⁴⁰ By the time modern environmentalism began to emerge in the 1960s, some scholars traced the precursors of modern conservation or sustainable yield management to the later 1600s and early 1700s, when a few leading administrators and writers addressed fears of shortages of wood or timber on large, often national scales, and promoted equally large-scale solutions. The key players in this story are a trio of men who were close to the centers of power in France, England, and the German principality of Saxony: Jean-Baptiste Colbert (1619–1683), John Evelyn (1620–1706), and Hans Carl von Carlowitz (1645–1714). All three became concerned that wood and timber shortages would undermine, respectively, French and English naval power or the business of mining in Saxony. Through their policies or books—including Colbert’s reform of royal forest administration (1661–85) and his authorship of Louis XIV’s Forest Ordinance of 1669, Evelyn’s *Sylva, or a Discourse of Forest Trees and the Propagation of Timber in his Majesties Dominions* (1664), and Carlowitz’s *Sylvicultura Oeconomica* (1713)—all three promoted as solutions to the problem of timber shortages the planting, preserving, and sustainable harvesting of trees.⁴¹

Yet far from being isolated geniuses that developed these ideas on their own, these men should rather be seen as important links in a long process of development that not only continued after them, but that also reached back centuries earlier, as three of this book’s chapters help us to understand. To begin with Colbert, it is apparent that his

“Great Reformation,” as it became known, was largely traditional in its concrete silvicultural guidelines; it innovated primarily in its centralizing vision and will to enforce.⁴² Yet as Sébastien Poulanc shows in masterful detail, even the centralization for which these reforms are chiefly remembered was at first, in the late seventeenth century, often an illusion. Rather than being able to impose their own vision in southern France’s Languedoc region, where local traditions of woodland management were thriving, royal foresters had to engage in the kinds of long, drawn-out negotiations and compromises that were typical of early modern governance.

Similarly, Sara Morrison’s study of Sherwood Forest in the seventeenth century reveals that John Evelyn’s famous call for the widespread planting of timber for naval needs had very little immediate impact.⁴³ She shows that Sherwood’s diverse woodlands were already managed in highly sustainable, mostly traditional ways, and that where new experiments in “plantation forestry” were carried out, such as in the Forest of Dean, they ran into difficulties and for the next century did not make any significant contribution to naval provisioning.

Although in his book of 1713 Carlowitz goes beyond his French and English predecessors by promoting more systematic and explicit plans for ensuring the sustainability of timber and other woodland resources,⁴⁴ Oliver Auge’s chapter shows that already by the sixteenth century, the need to sustain woodlands for the sake of posterity was becoming a prominent motif for some German writers. Moreover, his research demonstrates that in the principality of Schleswig-Holstein, people confronted a scarcity of woodlands through a wide range of adaptive responses, including the production of firewood through coppicing, the use of alternative energy sources like peat and cow dung, and regulations requiring replanting whenever trees were cut down. In sum, Colbert, Evelyn, and Carlowitz are notable primarily because they made already-traditional fears about shortages of woodland resources more well-known, and they framed both the problems they discussed and the solutions they proposed on large, state or national scales. These authors built squarely on traditions in woodland management that reached back to the Middle Ages.⁴⁵

Furthermore, even though these three men and even earlier figures had become concerned about using up woodland resources, these worries lacked crucial elements of modern forms of “sustainability thinking” that we now take for granted. As Paul Warde has recently argued in the *Invention of Sustainability*, the modern idea that “whole societies” risk

“undermining [their] environmental foundations,” which would not be described with the term “sustainability” until the 1970s, coalesced only in the nineteenth century. The emergence of this idea depended not only on awareness of possible scarcities on a wide scale, but also on several other gradual shifts in thinking about agronomy, chemistry, demography, and state-level economic growth, as well as a new interest in and capacity to calculate total stocks of resources. Perhaps most crucially, agronomists and others became more aware of the chemical mechanisms behind soil fertility and its loss.⁴⁶

Thus, one must avoid too easily assimilating to our modern concept of sustainability the virtually omnipresent efforts that preindustrial people made to keep a farm, for example, going. As far as we can tell, the basic motives for sustaining resources were not ecological, but rather social and economic.⁴⁷ Although many aspects of agrarian life during the long centuries of the preindustrial era exhibited a “tendency towards sustainability,” it seems clear that, as Warde puts it, the “operative rules” of agrarian life “regulated the impact of one person’s actions on others, and were not concerned with ecological sustainability itself.” Instead, these norms “were preoccupied with neighborly relations rather than ecological management.” They were part of an array of “‘homeostatic’ forces [that] exerted a balancing force on preindustrial societies.” Their ultimate goal was predictability, which it was hoped would help protect the interests of the farming household against “the caprice of one’s neighbors,” and this across the agrarian landscape.⁴⁸

Although we would agree with these insights concerning most preindustrial actors’ conscious intentions and abstract ideas, in this book, we instead emphasize the aggregate effects that many traditional limitations on practice and regulations could have. These effects were especially salient in contexts such as “commons,” where resources were held as common or shared property. In the 1980s, Elinor Ostrom and other social scientists developed an influential theoretical model of “common property” regimes.⁴⁹ Also known simply as “commons,” what Ostrom refers to as “common property” or “common pool” resource regimes should not be confused with conditions of “open access,” which allow anyone to use a resource. Garrett Hardin made precisely this mistake in his famous essay on the “Tragedy of the Commons,” when he explained why a hypothetical sheep pasture that was held in common would inevitably be overgrazed.⁵⁰ In contrast to resources left open to use by all comers, in a regime of “common property,” only those with vested rights, such as the members of a village community, have access.

These stakeholders were, collectively, both the owners and users of such shared resources, and thus had a strong interest in their sustainable management over the long term.

Furthermore, even if such resources as local waters and nonarable lands like pastures and woods were parts of the larger agro-ecosystem,⁵¹ the evidence suggests that the prevailing agrarian outlook was applied somewhat differently in these less intensively worked areas. Preindustrial people often distinguished between “cultivated” and “uncultivated” lands, a contrast founded on the different levels of labor applied to each, by opposing cultivated fields (*ager, terra arabilis*) and “uncultivated” or “waste” spaces (*saltus, terra inculta, vastum*). These latter, “uncultivated” waters and lands were also those that were most often shared among multiple users and subject to many different modes of exploitation. It was precisely in these contexts that early efforts to preserve and protect resources were expressed most clearly, especially when such spaces were governed as commons.

Several of this book’s chapters contribute to the ongoing reappraisal of Europe’s historical commons, which across the last several centuries of the preindustrial period often remained both widespread and resilient.⁵² Three chapters, those by Maïka de Keyser, Michael Zeheter, and Eva Jakobsson, focus the most on commons’ governance—in very different contexts. De Keyser studies how villagers in sandy heathlands maintained their extensive common lands, whose fragility they well understood, from the Late Middle Ages right down to the nineteenth century. Zeheter examines commons that developed in an at least equally challenging context: the Lake Constance fisheries. Governing aquatic resources over an expanse of more than 500 square km of water might seem nearly impossible in preindustrial circumstances, especially given that from the fourteenth to the nineteenth century the lake was subject to a shifting variety of rival political authorities, including city-states, the Habsburg Holy Roman Emperors, and the Swiss Confederacy. Yet all these authorities deferred to the lake’s professional fishermen and their regulations, thereby avoiding any apparent tragedy for almost five hundred years. Jakobsson’s chapter tackles a unique commons: the free-flowing character of rivers. By defending the customary principle that one-third of a river’s flow must be held open, undiminished and unobstructed, preindustrial Swedes balanced the competing demands of fishers, mill-owners, and farmers.

These examples may suffice to show that the analysis of the *idea* of sustainability in the preindustrial world by no means exhausts the

interest of this topic for historians. Out of an abundance of caution, one might avoid the use of modern terms like “sustainability” and “conservation” altogether, for example by defining our topic as that of “homeostatic forces.” But such a change in terminology would accomplish little. Instead, the contributors to this volume use “sustainability” and “conservation” advisedly, without assuming all of their modern meanings.

The Plan of *Conservation’s Roots*

The goal of this volume is to bring together case studies from all over preindustrial Europe to deepen our understanding of resource management itself and the ways in which it reflected and shaped larger sociocultural developments. A few shared premises set this volume apart from similar collections. The first of these is the commitment, as explained above, to applying the perspectives and methods of environmental history to the centuries prior to the massive transitions associated with the industrial revolution that began in Britain and Europe in the late eighteenth and nineteenth centuries. Although there is now a growing body of scholarship on the environmental history of preindustrial societies, much of this research has focused on the impact of Europe’s overseas colonialism,⁵³ the implications of landscape manipulation for elite political power,⁵⁴ or, as just explained, the origins of our modern attitudes toward nature.

Second, this volume is distinctive because of its broad chronology and Europe-wide scope. In the last two decades, scholars have published geographically targeted or resource-specific studies; however, this volume represents one of the first collective scholarly efforts to explore the concrete, practical methods and approaches that preindustrial populations in Europe adopted to manage such naturally regenerating resources as pastures, wild game, woodlands, fish, and flowing fresh water, and situate them within their historical contexts. Finally, all of the contributors to this volume tackle matters of resource management while asking one of the central questions posed by modern environmental historians: Just how “wisely,” “conservatively,” or “sustainably” did premodern Europeans manage their resources?

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Notes

1. Andrew Shryock and Daniel Lord Smail, eds., *Deep History: The Architecture of Past and Present* (Berkeley: University of California Press, 2011), 3–20.
2. Lynn T. White Jr., “The Historical Roots of Our Ecologic Crisis,” *Science* 155 (1967): 1203–7.
3. David J. Herlihy, “Attitudes toward the Environment in Medieval Society,” in *Historical Ecology: Essays on Environment and Social Change*, ed. Lester J. Bilsky (London: Kennikat Press, 1980), 101–15; John Aberth, *An Environmental History of the Middle Ages: The Crucible of Nature* (New York: Routledge, 2013), 5–9; Richard Hoffmann, *An Environmental History of Medieval Europe* (New York: Cambridge University Press, 2014), 94–112.
4. Ellen F. Arnold, *Negotiating the Landscape: Environment and Monastic Identity in the Medieval Ardennes* (Philadelphia: University of Pennsylvania Press, 2013); Paolo Squatriti, “The Floods of 589 and Climate Change at the Beginning of the Middle Ages: An Italian Microhistory,” *Speculum* 85 (2010): 799–826.
5. Richard Unger, “Introduction: Hoffmann in the Historiography of Environmental History,” in *Ecologies and Economies in Medieval and Early Modern Europe: Studies in Environmental History for Richard C. Hoffmann*, ed. Scott G. Bruce (Boston: Brill, 2010), 15.

6. Donald Worster, *Nature's Economy: History of Ecological Ideas*, 2nd ed. (New York: Cambridge University Press, 1994), 3–25; Paul Warde, “The Environmental History of Pre-industrial Agriculture in Europe,” in *Nature's End: History and the Environment*, ed. Sverker Sörlin and Paul Warde (New York: Palgrave Macmillan, 2009), 71.
7. Richard C. Hoffmann, Nancy Langston, James C. McCann, Peter C. Perdue, and Lise Sedrez, “AHR Conversation: Environmental Historians and Environmental Crisis,” *The American Historical Review* 113, no. 5 (2008): 1431–65.
8. Paolo Squatriti, “Introduction: Natures Past and Present Environmental Histories,” in *Natures Past: The Environment and Human History*, ed. Paolo Squatriti (Ann Arbor: The University of Michigan Press, 2006), 4.
9. Emmanuel Kreike, *Environmental Infrastructure in African History* (New York: Cambridge University Press, 2013), 1.
10. William Cronon, “The Trouble with Wilderness; or, Getting Back to the Wrong Nature,” in *Uncommon Ground: Rethinking the Human Place in Nature*, ed. William Cronon (New York: W. W. Norton & Co, 1995), 69–90.
11. Petra J. E. M. Van Dam, “Sinking Peat Bogs: Environmental Change in Holland, 1350–1550,” *Environmental History* 6, no. 1 (2001): 32–46; Karl Jacoby, *Crimes Against Nature: Squatters, Poachers, Thieves and the Hidden History of American Conservation*, rev. ed. (Berkeley: University of California Press, 2014).
12. Kreike, *Environmental Infrastructure*, 2; Philip J. Deloria, *Playing Indian* (New Haven: Yale University Press, 1998), 154–80.
13. For example, see Alfred Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900*, 2nd ed. (New York: Cambridge University Press, 2004); Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860* (New York: Cambridge University Press, 1995); and John Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley: University of California Press, 2003).
14. Joachim Radkau, *Nature and Power: A Global History of the Environment*, trans. Thomas Dunlap (New York: Cambridge University Press, 2008), 11–19, 36–45, 55–85.
15. For example, see Naomi J. Sykes, “Hunting for the Anglo-Normans: Zooarchaeological Evidence for Medieval Identity,” in *Just Skin and Bones? New Perspectives on Human-Animal Relations in the Historical Past*, ed. Aleksander Pluskowski (Oxford: BAR International Series, 2005), 73–80; Roberta Gilchrist, *Gender and Archaeology: Contesting the Past* (New York: Routledge, 1999); and Péter Szabó, “Historical Ecology: Past, Present, and Future,” *Biological Reviews. Cambridge Philosophical Society* 90 (2015): 997–1014.
16. For the classic distinction between these three approaches to environmental history (ideas about nature, human uses of nature, and human impacts on

- nature), see Donald Worster, "Appendix: Doing Environmental History," in *The Ends of the Earth: Perspectives on Modern Environmental History*, ed. Worster (New York: Cambridge University Press, 1988), 289–307.
17. Warren C. Brown, et al., eds., *Documentary Culture and the Laity in the Early Middle Ages* (New York: Cambridge University Press, 2013).
 18. Joel T. Rosenthal, ed., *Understanding Medieval Primary Sources* (New York: Routledge, 2012).
 19. Robert A. Houston, *Literacy in Early Modern Europe: Its Growth, Uses and Impact, 1500–1800*, 2nd ed. (New York: Routledge, 2002), 141–71.
 20. Michael T. Clanchy, *From Memory to Written Record: England, 1066–1307*, 3rd ed. (Malden, MA: Wiley-Blackwell, 2013); Richard Britnell, ed., *Pragmatic Literacy East and West, 1200–1330* (Woodbridge: Boydell Press, 1997); Mathias Schmoeckel and Werner Schubert, eds., *Handbuch zur Geschichte des Notariats der europäischen Traditionen* (Baden-Baden: Nomos, 2009).
 21. Georges Duby, *Rural Economy and Country Life in the Medieval West*, trans. Cynthia Postan (Columbus: University of South Carolina Press, 1968; repr. Philadelphia: University of Pennsylvania Press, 1998); Fernand Braudel, *Civilization and Capitalism, 15th–18th Century*, vol. 1: *The Structures of Everyday Life*, trans. Siân Reynold (New York: Perennial Library, 1985); Carlo M. Cipolla, *Before the Industrial Revolution: European Society and Economy, 1000–1700*, 3rd ed. (New York: W. W. Norton & Co., 1994); and Bruce Campbell, *English Seigneurial Agriculture, 1250–1450* (New York: Cambridge University Press, 2000).
 22. Worster, *Nature's Economy*, 342–87; Radkau, *Nature and Power*, 250–60; and Paul Warde, Libby Robin, and Sverker Sörlin, *The Environment: A History of the Idea* (Baltimore: Johns Hopkins University Press, 2018).
 23. *Oxford English Dictionary Online* (New York: Oxford University Press, 2018), <http://www.oed.com>: "Conserve, v.;" "conservation, n.;" "sustain, v.;" and "sustainable, adj."
 24. Ulrich Grober, *Sustainability: A Cultural History* (Totnes, UK: Green Books, 2012), 155, 174, 181–86; and Jeremy Caradonna, *Sustainability: A History* (New York: Oxford University Press, 2014).
 25. "Conservation," UN World Conservation Monitoring Centre, <http://www.biodiversitya-z.org/content/conservation>; and, in Europe, see the Bern Convention on the Conservation of European Wildlife and Natural Habitats, in force since 1982: "Bern Convention," Council of Europe, <https://www.coe.int/en/web/bern-convention/>.
 26. James Winter, *Secure from Rash Assault: Sustaining the Victorian Environment* (Berkeley: University of California Press, 1999); Thomas Lekan, *Imagining the Nation in Nature: Landscape Preservation and German Identity, 1885–1945* (Cambridge, MA: Harvard University Press, 2004); Frank Uekoetter, *The Green and the Brown: A History of Conservation in Nazi Germany* (New York: Cambridge University Press, 2006), xiii–vx, 17–21.

27. Henry E. Lowood, "The Calculating Forester: Quantification, Cameral Science, and the Emergence of Scientific Forestry Management," in *The Quantifying Spirit in the Eighteenth Century*, ed. Tore Frängsmyr, H. L. Heilbron, and Robin E. Rider (Berkeley: University of California Press, 1990), 337–42; Grober, *Sustainability*; and compare: Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement 1890–1920* (Cambridge, MA: Harvard University Press, 1959), 28–33.
28. *Oxford Latin Dictionary*, 2nd ed., 2 vols., ed. P. G. W. Glare (New York: Oxford University Press, 2012). See Grober, *Sustainability*, 19, 37–43, 46, 51–54, who does not examine early environmental practices.
29. For the French verbs *soutenir* and *conserver* and the noun *la conservation*, see *Dictionnaire Historique de la Langue Française*, 2 vols., ed. Alain Rey (Paris: Le Robert, 1992).
30. For a French example, see the next section here below. For the Spanish case, see John T. Wing, *Roots of Empire: Forests and State Power in Early Modern Spain, c. 1500–1750* (Boston: Brill, 2015), 2–3, 19–29, 38, 44, 54–56, 68, etc.
31. For all of the Latin terms cited in this passage and below, see Jan F. Niermeyer and C. Van de Kieft, eds., *Mediae Latinitatis Lexicon Minus*, rev. ed., 2 vols., ed. Johannes W. J. Burgers (Boston: Brill, 2002).
32. Karl Appuhn, *Forest on the Sea: Environmental Expertise in Renaissance Venice* (Baltimore: Johns Hopkins University Press, 2009), 94–111.
33. See the chapter by Dolly Jørgensen and all five chapters of the book's third section on woodlands.
34. Such campaigns had clearly begun by the mid-eighteenth century; see Jeremy Caradonna, "Conservationism Avant la Lettre? Public Essay Competitions on Forestry and Deforestation in Eighteenth-Century France," in *Invaluable Trees: Cultures of Nature, 1660–1830*, ed. Laura Auricchio, Elizabeth H. Cook, and Giulia Pacini (Oxford: Voltaire Foundation, 2012), 39–54.
35. François-André Isambert et al., eds., *Recueil général des anciennes lois françaises depuis l'an 420 jusqu'à la Révolution de 1789*, 29 vols. (Paris: Belin-Leprieur, Plon, 1826–1833), vol. 12: 49–74: "Nous deument advertis et informez des pilleries, larrecins, et abus qui se font aux eaues et forests de nostre royaume, les quelles choses . . . reviennent au grand détriment et diminution du bien de la chose publique. . . . À cette cause . . . avons envoyé quérir en nostre chambre des comptes les anciennes ordonnances faictes sur la réformation, entretenement et conservation de nos eaues et forests et aussi sur le fait des chasses, lesquelles . . . les gens de nostre conseil . . . nous ont rapporté icelles ester très utiles et profitables pour la conservation desdites forests."
36. George P. Marsh, *Man and Nature, or Physical Geography as Modified by Human Action* (New York: Charles Scribner and Co., 1864), 279. More recently, see Charles R. Young, "Conservation Policies in the Royal Forests of Medieval England," *Albion* 10, no. 2 (1978): 95–103; and James Latham, "The Development of Forest Conservation in Europe," in *Europe's Changing Woods*

- and *Forests: From Wildwood to Managed Landscapes*, ed. Keith J. Kirby and Charles Watkins (Boston: CAB International, 2015), 309–25.
37. Clarence Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967), 318–41, quoted at 326; cf. 485–97.
 38. Patricia Crone, *Pre-industrial Societies: Anatomy of the Pre-Modern World*, 2nd ed. (London: Oneworld Publications, 2013), 16, 204, and passim; Cipolla, *Before the Industrial Revolution*, 7–22; Astrid Kander, Paolo Malanima, and Paul Warde, *Power to the People: Energy in Europe Over the Last Five Centuries* (Princeton: Princeton University Press, 2013), 14, 37–43, 90–103.
 39. See also Dolly Jørgensen, “All Good Rule of the Citee’: Sanitation and Civic Government in England, 1400–1600,” *Journal of Urban History* 36, no. 3 (2010): 300–15; and Hoffmann, *Environmental History*, 263–78.
 40. We omit here another important hypothesis about the source of these ideas, which may be called the “colonial” model, and which was pioneered by Grove, *Green Imperialism*. As Grove and others have shown, ideas deriving from colonial contexts had negligible impact on sustainable practices within Europe before ca. 1750.
 41. Glacken, *Traces on the Rhodian Shore*, 485–97; Keith Thomas, *Man and the Natural World: Changing Attitudes in England, 1500–1800* (New York: Penguin, 1983), 197–202; Simon Schama, *Landscape and Memory* (New York: Knopf, 1995), 142–84; Grober, *Sustainability*, 63–85; Caradonna, *Sustainability*, 32–54; and Kieko Matteson, *Forests in Revolutionary France: Conservation, Community, and Conflict, 1669–1848* (New York: Cambridge University Press, 2015), 34–38, 50–68.
 42. Andrée Corvol, *L’homme et l’arbre sous l’Ancien Régime* (Paris: Economica, 1984), 187–264; *Les Eaux et Forêts du 12e au 20e siècle* (Paris: Centre National de la Recherche Scientifique, 1987), 131–65, 434, and 593 (showing traditional views); Jérôme Buridant, *Espaces forestiers et industrie verrière, XVIIe–XIXe siècle* (Paris: L’Harmattan, 2005), 291–364; and Martine Chalvet, *Une histoire de la forêt* (Paris: Éditions du Seuil, 2011), 162–63.
 43. John Evelyn, *Sylva: Or, a Discourse on Forest Trees and the Propagation of Timber in his Majesty’s Dominions*, 4th ed., 2 vols., ed. John Nisbet (London: A. Doubleday & Co., 1908). On Evelyn’s intellectual influence, see Schama, *Landscape and Memory*, 159–74; Paul Warde, *The Invention of Sustainability: Nature and Destiny, c. 1500–1870* (New York: Cambridge University Press, 2018), 61–64, 74–75.
 44. Hans Carl von Carlowitz, *Sylvicultura oeconomica* (Leipzig: Johann F. Braun, 1713), repr. and ed. Harald Thomasius and Bernd Bendix (Remagen-Oberwinter: Verlag Kessel, 2013). See Grober, *Sustainability*, 80–88; Warde, *Invention of Sustainability*, 166–71.
 45. Warde, *Invention of Sustainability*, 58–101. Recent studies of state forestry dating from the fifteenth and sixteenth centuries include Corrine Beck, *Les eaux et forêts en Bourgogne ducale (vers 1350–vers 1480): Société et biodiversité*

- (Paris: L'Harmattan, 2008); Appuhn, *Forest on the Sea*; and Wing, *Roots of Empire*.
46. Warde, *Invention of Sustainability*, 5–12, 333–35.
 47. Joachim Radkau, "Wood and Forestry in German History: In Quest of an Environmental Approach," *Environment and History* 2 (1996): 64; and Joachim Radkau, "'Nachhaltigkeit' als Wort der Macht: Reflexionem zum methodischen Wert eines umweltpolitischen Schlüsselbegriffs," in *Umwelt und Herrschaft in der Geschichte. Environnement et pouvoir. Une approche historique*, ed. François Duceppe-Lamarre and Jens Ivo Engels (Munich: R. Oldenbourg, 2008), 132.
 48. Warde, "Environmental History," 72, 76, and 88; Warde, *Invention of Sustainability*, 4–5.
 49. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York: Cambridge University Press, 1990).
 50. Garrett Hardin, "The Tragedy of the Commons," *Science* 162 (1968): 1243–48.
 51. Donald Worster, "Transformations of the Earth: Toward an Agroecological Perspective in History," *The Journal of American History* 76, no. 4 (1990): 1093–94; and Hoffmann, *Environmental History*, 148–49, 155–58, and passim.
 52. Martina de Moor, Paul Warde, and Leigh Shaw-Taylor, eds., *The Management of Common Land in North West Europe, c. 1500–1850* (Turnhout: Brepols, 2002); Christopher Rodgers, Eleanor A. Straughton, Angus J. L. Winchester, and Margherita Pieraccini, *Contested Common Land: Environmental Governance Past and Present* (Washington, DC: Earthscan, 2011); and Tine De Moor, *The Dilemma of the Commoners: Understanding the Use of Common-Pool Resources in Long-Term Perspective* (New York: Cambridge University Press, 2015).
 53. See above, in the section on ideological misconceptions.
 54. L. M. Cantor and J. Hatherly, "The Medieval Parks of England," *Geography* 64, no. 283 (1979): 71–85; Constance Hoffman Berman, "Medieval Agriculture, the Southern French Countryside, and the Early Cistercians: A Study of Forty-Three Monasteries," *Transactions of the American Philosophical Society* 76, part 5 (1986): i–179; Robert Liddiard, ed., *The Medieval Park: New Perspectives* (Macclesfield: Windgather Press, 2007).

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