This article approaches the communication space and social construct of Europe from the perspective of environmental history and traces the commonalities and differences in the interaction between humans and the environment. It is also a call for an interdisciplinary and an international environmental history. The diversity of nature and the environment in Europe is examined in various fields. With its discussion of spaces, climate and resources, the first section deals with natural environments, before anthropogenic environments are added to the discussion in the second section, and then the connections between the fundamental categories of nature / environment, rule, economy and culture are outlined in the third section. The final section presents general environmental historical periodizations in relation to European history.

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Introduction

There has been intensive historiographical research on nature and the environment in Europe for many years. It is no longer possible to keep abreast of the new publications, and many subfields have opened up in this field of research. However, this does not necessarily mean that a European environmental history exists. Such a history is at best beginning to emerge, and is restricted to individual European regions – such as northern Europe or the Mediterranean region. Research is almost exclusively conducted on the national and regional context, in spite of cross-border organizational and institutional efforts, such as the European Society for Environmental History.

Some thematic and regional subdisciplines of historical studies appear only to have begun to engage with the topic of environmental history in a systematic way in the very recent past. To the extent that cross-border studies on individual periods exist, they tend to be global rather than European in scope, not least because many of the current environmental problems are global in nature. Nevertheless, a debate has recently begun about the questions and topics of a European environmental history, which looks for commonalities beyond the social construct of Europe, for example about the "natural environments" of the continent.

In this debate, "nature" and "environment" are not used in a consistent way. These terms are generally anything but unambiguous. "Nature", as the older of the two, has a conceptual history that stretches back to classical antiquity and that is very contradictory and confused, not just at first sight. In its original meaning (natura in Latin, physis in Greek), it was connected with growth and fertility. Crucially, in the context of the topic of this article, humans as organisms are part of nature and are existentially dependent on it, they can only live with and in nature. To emphasize this fundamental ecological fact is not to lose sight of the varied and changing ideas and constructions of nature that come into being in the minds of people. Rather both belong indivisibly together.

The situation is not much different with the considerably newer concept of "environment". Jakob Johann von Uexküll (1864–1944), the biologist and zoologist, is considered one of the originators of the modern scientific concept of environment. According to him, all living beings have their own environments, which are based on their respective subjective activities and perceptions. Environment is a relational concept to the extent that it refers directly to the natural, but also the social space surrounding the living being and forms a unified whole with the latter – specific instances of which can be investigated.
is not just historians who frequently use nature and the environment synonymously. Reference is often made to the "natural environment" of humans, to distinguish it from their social and cultural surroundings. There is no prospect – not even a remote one – of a clear and fixed differentiation between the two concepts. Thus it is often not explicitly stated whether environment refers to nature as a whole, human surroundings or a specific ecological system; but this can hardly be a surprise given the participation of so many disciplines – of the natural sciences as well as the humanities – in the object of research. There is a largely tacit consensus that the term environmental history should be used when referring to historical research on the interrelationship between humans and the nature that surrounds them. This appears to have established itself as the definition of environmental history. We must differentiate between this more recent environmental history and a more longstanding preoccupation with the history of nature. The latter rose to prominence as a scientific discipline in the 18th century under the title of natural history. Drawing on classical antecedents, particularly Pliny the Elder’s (23–79) Historia Naturalis, its representatives primarily investigated geography, ornithology and mineralogy. This Enlightenment natural history was able to build on the early modern thirst for discovery, particularly in the areas of zoology and botany. By the early 18th century, about 10,000 plant species had already been identified. Among the prominent representatives of this natural history were the Swedish naturalist Carl von Linné (1707–1778), whose Systema Naturae was first published in 1735, and his French colleague Georges-Louis Leclerc de Buffon (1707–1788), who began publication of his multi-volume Histoire naturelle générale et particulière in 1749. The latter work received great attention among the expanding Enlightenment bourgeois public and was translated into many European languages. Natural history was in this case conceived of largely without development. Nature was simply described and classified. The discipline was distinguished by a supposed fidelity to nature. By contrast, the role of humans in this natural history was depicted as dynamic and positive. Their stepping out of nature became a metaphor for progress and early-bourgeois emancipation.

This survey article will not recapitulate or elaborate on details of the basic elements linked to it. To the extent that the state of research permits, it will instead attempt to repeatedly test whether nature and the environment have contributed to the emergence of the communication space that is Europe, whether and where – from an environmental historical perspective – commonalities and also distinguishing features can be identified. In this, historical human-nature relationships are understood as being as diverse as the European continent and its history. Nature and the environment are thus more suitable as objects for the observation of this European diversity than almost any other topic field. This is done in four sections. First, with the spaces, climate and resources, the natural foundations of Europe are examined. In the second section, this is then related more closely to humans, with the focus being placed in particular on cultural landscapes, animals and natural disasters. The relationship between nature and the environment and the three fundamental historiographical categories of rule, economy and culture are outlined in the third section, before the final section introduces some general attempts at environmental historical periodizations taking account of European history.

Natural Environments: Spaces, Climate and Resources

The emergence of environmental history was accompanied by a controversy about its orientation and its centre. What should be the focus of its interest? Humans or nature? Should environmental history be written biocentrically or anthropocentrically? Is it in fact possible for it to adopt the perspective of an earthworm, a wolf or an oak? Does this not raise a host of insurmountable methodological difficulties and problems regarding sources? Many historians view this controversy as having been decided. They evaluate it as part of the adolescent search for identity of a young subdiscipline that has since been overcome. It is argued that it was the consciousness of methods if anything, that had made this controversy acute; our questions are "unavoidably anthropocentric", it is argued. These arguments acquire their meaning from the perspective of historical studies and of those who wish to move environmental history to the centre of this discipline; humans are naturally at the centre, even where supposedly human-free structural history predominates. However, if one takes into account those who participate in the interdisciplinary endeavour of environmental history, which includes natural sciences disciplines such as palaeobotany and archaeobotany, historical geography and climatology and many others, then the answer has to be more nuanced. One challenge lies, for example, in the reconstruction of natural states and largescale landscape changes that were not, or were only slightly influenced by humans, such as changes in river courses. Generally, this places very long and diverse geological and biological time periods on the research agenda. Scientifically proving and exposing in a nuanced way the pre-existing dynamic inherent in nature is among the most prominent achievements of such broad environmental historical approaches. An environmental history that is exclusively anthropocentric in approach and that draws solely on the archives of society cannot do this on its own. Biological and geological data from the archives of nature are as indispensable for our knowledge of such processes as are natural sciences approaches: thermometry, pluviometry (udometry), dendrochronology, fossil pollen grains, data gathering from (glacial) ice cores, radiocarbon methods, and the identification of glacial deposits and sizes are just some of these.
Even though research practice often does not reflect this, it has been an argumentative tool of environmental history from the start that ecological processes in no way stop at national borders. As we approach our own present time, this certainly applies to the European continent also. Borders that are too rigid and that are at best political borders are in any case a hindrance for the analysis of the interrelationships between humans and nature. Environmental history cannot and must not therefore be limited to the political space. At the same time, space is an environmental historical research category par excellence: woodlands (Media Link #ai), fields, soils (Media Link #aj), rivers, seas and their coasts are just some examples. They are all mutable, self-dynamic natural foundations and points of departure, which influence and change humans and vice versa. Even though very different landscapes can emerge in the minds of humans and be virtually superimposed on the geographically tangible and measurable space, environmental history like most other subdisciplines invariably needs concrete spaces for investigation, if it is to remain demonstrative and if it is to avoid arguing exclusively in terms of the history of ideas. However, past natural spaces must be approached with methodological caution. They are often difficult to read. For example, due to the distinct language and symbols used in them, cartographic representations are not self-explanatory. Neither should they be confused with the real thing, not only because they are snapshots that are overtaken by natural change even at the moment they are produced and they are intended to reduce complexity, but also because they often contain mistakes or are guided by specific interests.\(^8\)

Just looking at the map of Europe dispels any doubt. It is not possible to identify clear and unchanging topographical, geographical or geological borders. There is no European environment. Instead, we encounter many environments, which are generally not coterminous with national borders. Not even the perspective from the outside creates the impression of uniformity. The natural spaces could hardly be more diverse. Coastal and high-level mountainous regions are as much a part of the continent as lowlands and mid-level mountainous regions, for example the Polish marshlands and the French Massif Central. If one does not count the northern Caucasus (Media Link #ak) as belonging to Europe, then the altitude alone spans a range of about five kilometres, from the highest point of the Alps (Media Link #al) (Mont Blanc, 4810 metres) to the northern coast of the Caspian Sea, which is 28 metres below sea level. All of this is also subject to change over the very "long duration". The way in which geological activity has shaped this European space and constantly changes it is the object of investigation of the various environmental historical disciplines referred to above. It is they who have provided explanations for the location of the Alps, the repeated glacial climatic changes, the continuous change in European flora and fauna, and they help to elucidate the small scale of European landscapes, and the diversity of habitats.\(^9\)

While most of the continent lies in the temperate latitudes, the climate could scarcely be more varied from north to south and from west to east: the arctic climate in the north; the Mediterranean, at times subtropical conditions in the south, with hot dry summers and mild, wet winters. While large parts of western Europe mainly have mild winters and cooler summers, the continental climate predominates in the east, with cold winters and hot summers. Climate, as a statistically recordable and measurable dimension, is also bound to space and time, for example, to early modern southern Europe or modern central Europe. The basic climatic conditions described above are, of course, not immovable constants. Even before historical climatology, we knew that the climate is subject to natural deviations not caused by humans, which in turn influence humans and their actions. In his ground-breaking three-volume work La Méditerranée et le Monde Méditerranéen à l’époque de Philippe II first published in 1949, the French historian and leading member of the Annales School Fernand Braudel (1902–1985) (Media Link #am) had already treated the climate as part of the geographical environment (he referred to this as "milieu"), in which he placed the trends and structures and the history of events. He combined the milieu with the concept of the longue durée, the long duration, a field that tends to be more defined by stasis than by change. It was not till the second edition published in 1966 that Braudel ascribed considerably more significance to climate changes. However, no role was yet attributed to humans as actors in this change. In more recent times, humans have left their imprint on the climate, which is why for the last approximately 150 years it must be dealt with in the section on anthropogenic environments. The heated debate about whether the modern interglacial has anthropogenic causes and is being amplified by humans is part of this context. Emphasizing natural spatial and climatic differences on the European level does not mean that it is impossible to investigate commonalities. Thus, similar ecotypes can be identified in small-scale European comparisons. Micro-climatically comparable cultural landscapes and shared histories of (over) utilization beyond political-state allegiances can be investigated: for example, wine-growing regions, types of woodland management, national parks, national conservation areas and mining regions.

Natural resources are also part of the natural environment of humans. Discussions of these resources usually focus on the consumption of non-renewables or resources that regenerate over very long time periods, such as coal and oil, as well as the (unintended) consequences of their use. Concerns about the availability of energy resources have thus served from the start as an important impetus in environmental historical research, in the questions it pursues, in its theses and also in its periodizations. However, this is not a history that only began with industrial modernity, and not just from a European perspective. It goes back much further, when one considers for example the universally-used resources of water and timber. Humans use water to drink, to irrigate, to generate energy and as a
means of transportation. But it also poses a threat, and not just in coastal regions (Media Link #ao) and along rivers (Media Link #ap). Securing a reliable and safe supply of water was for a long time the primary resource problem, particularly in the urban centres, where an artificial network of streams and canals often had to be constructed to provide water, for waste disposal and for fire defences. Whether for heating, cooking or building, whether for tools, barrels or ploughs, wood was also an essential resource. It accompanied humans through their lives literally from the cradle to the grave. It is no coincidence that the concept of sustainability emerged in the context of woodland management as early as the beginning of the 18th century. This is also why the economist and sociologist Werner Sombart (1863–1941) (Media Link #aq) described the preindustrial era as having "ein ausgesprochen hölzernes Gepräge" (a decidedly wooden character), and many contemporaries referred to timber as a "Lebensmittel" (staple). The transportation of resources over longer distances is not exclusive even to the modern era, as ancient Egyptian expeditions to the fabled Land of Punt to import gold, ivory, salt and many other goods indicates.

Of course, one cannot but acknowledge that resource issues and resource usage have taken on new dimensions over the past two centuries and again since the 1950s. Since 1950, humans have used more gold, iron ore, copper and tin than in the entirety of human history before that. All resource usage has an inherent, hidden environmental problem. Resources are extracted, (chemically) processed, transported, (incompletely) consumed, leave remainders in the form of refuse and exhaust fumes and are reused – the treatment of natural resources goes through many stages, and it is not only the recycling of resources that has yet to be adequately investigated. And while industrialization (Media Link #as), which is based on non-renewable resources, began in European regions, it is not possible to identify a distinctively European characteristic in the treatment of resources. The problems of today are either global in nature or they only become clearer when one looks back in the regional context, which is also dominated by a diversity that is not always free of contradictions.

Anthropogenic Environments

Distinguishing between natural and anthropogenic environments is an archetypal differentiation, in order to highlight spheres of influence of humans. These spheres of influence have grown over the course of history to the extent that it is now almost impossible to identify a natural environment under water, on land, in the atmosphere or in space directly around the earth that is not influenced by humans. Particularly in southern and central Europe, it is likely that already by the late-medieval period there were few natural landscapes that remained untouched by humans. Even in those places where nature lovers of the 19th and early-20th centuries believed they had discovered wilderness and primitive nature, we see diverse cultural landscapes. In central Europe, these include heath regions (Media Link #at) as well as orchard meadows and pastoral forests, which only retain their typical form through continued use. The human footprint has fundamentally shaped European landscapes and not only since industrialization. Even as the Roman senator and historian Tacitus (ca. 58–ca. 120) (Media Link #au) described Germania in the first century as densely forested, marshy and backward, non-Roman central Europe had been a settled, cultivated and managed landscape for a considerable time. Logging near settlements, slash-and-burn deforestation, arable farming and hunting – without wishing to create the impression of decline and overuse – these influences on the immediate surroundings were manifold already in antiquity and the Middle Ages and transformed the landscape. With population growth the encroachment spread. The emergence of urban centres, road networks and trade connections accompanied and accelerated this process, which affected flora as well as fauna.

That the history of animals (Media Link #aw) belongs to that of the human species and vice versa is demonstrated not only by hunting. Animals are increasingly perceived as historical actors, as subjects, and no longer exclusively as a static background and as objects. For a long time this was not commonly understood, at least not in European historiography. While social history had already investigated the beginnings of animal protection, research on human-animal interconnections has only gained momentum in recent years. New perspectives have come primarily from the English-speaking world, where interdisciplinary human-animal studies has been a topic of environmental history for some time. Also in human-animal studies, the urgent question of the methodological approach arises in discussions about the attributing of agency. Where are the boundaries between humans and animals? How much animal is (still) in a human? Can personality and intentionality be ascribed to animals as an object of investigation? It is no coincidence that these questions remind one of the controversy about biocentric versus anthropocentric environmental history. They cannot be decided by historical studies alone, which concentrates on the social roles and cultural functions of human-animal relationships, to the extent that these can be determined from the archives of society. However, in order to get as close as possible to the biological creature, for example to be able to judge the natural behaviour of an early modern wolf, bear, beaver or otter that is being pursued, we are again dependent on natural sciences disciplines such as behavioural biology.
In the cities in particular, animals were integral to the human environment, not just as beasts of burden and livestock, but also as synanthropes and pets. Whether livestock, particularly horses (Media Link #ax), underwent a direct loss of significance in the course of the fundamental processes of industrialization and urbanization remains to be determined. There are some indications that this was not the case, but research in this area is in its early stages. We have more information about the countless exotic animals that populated the European urban centres and courts – dead or alive, in naturalist museums as well as in the menageries of rulers and zoological gardens. Supposed liminal cases between the species are particularly informative as regards the relationship between humans and animals of the respective period. The so-called Hottentot Venus Sarah Baartmann (ca. 1789–1815), and the supposed elephant man Joseph Merrick (1862–1890) (Media Link #ay) became famous and were brought around the large European cities as attractions, freaks and not least also as "missing links" between humans and animals. The animal welfare perspective of the 19th and 20th centuries, which was rooted in the European Enlightenment, opens up a European angle. Associations for the protection of animals began to emerge in the first half of the 19th century, mostly at the local level. In many respects, Great Britain led the way in this regard. In 1824, a group led by the Anglican clergyman Arthur Broome (1779–1837) founded the Royal Society for the Prevention of Cruelty to Animals. By the second half of the 19th century, national associations had formed in many other countries, and connections began to form between these associations throughout Europe through international animal protection congresses.

The above should not be understood as a plea for a Eurocentric view of animal-human relationships. In this context also, the perspective must extend beyond Europe if we are to discover common European aspects. The shared colonial past of the European rulers and states presents one such transnational opening of perspective. In many cases, a history of exploitation emerges here. The turbulent history of the central African state of Congo is a particularly horrific example of this. Whether flora or fauna, sheep and cows in Australia, Mexico and North America and also pathogens, countless instances demonstrate the often dramatic ecological consequences of the history of European expansion – in the colonies and also in Europe. The American environmental historian Alfred Crosby (*1931) (Media Link #az) has done important work researching the transfer of infectious diseases in the luggage of the conquerors and colonist (such as mumps, typhoid and malaria) and the epidemics they caused, which cost the lives of more than 90% of the indigenous population of North America. He described this aptly with the phrase "ecological imperialism". However, European expansion also had effects on Europe itself. For example, in the 16th century the Spanish conquistadors brought back the potato from the highlands of the Andes, which in the subsequent centuries became a staple (Media Link #bo) in the European diet. This was to have catastrophic consequences from 1845 onward as the great European famine and the waves of European migration (Media Link #b1) from the mid-19th century can only be understood in the context of the preceding spread of the potato (Media Link #b2). Ireland and Belgium were particularly badly affected, as at its worst the potato harvest fell by almost 90 percent in these countries.

While other factors were also at play, in Ireland alone around one million people died as a result (Media Link #b3). A fungus which grows on the tubers, stalks and leaves caused the potatoes to rot and the years around 1845 provided ideal conditions for its spread. Like the potato itself, the fungus very probably originated in South America – as DNA analyses strongly suggest. Anthropogenic environments also include extreme natural events, as the latter only gain their significance as "natural disasters" through humans, who experience nature as a threat in these situations. Whether floods, earthquakes, storms, fires or volcanic eruptions, societies decide when events become natural disasters – they construct them. While this is certainly true, this perspective sometimes causes nature itself to disappear from the radar of research – it becomes purely the trigger for investigation. Partly as a result of these culturalistic approaches, for a number of years research on natural disasters has been one of the most productive areas of environmental history, including – or especially – in a cross-period perspective from antiquity to the present. A large portion of the research focuses on the Middles Ages and the early modern period. This is also a consequence of current debates about climate change, to which destructive natural events are often attributed. Extreme events also lend themselves to research because there is usually an excellent basis of primary sources. Research in this area has focused on questions regarding destruction and efforts to cope with it, the resulting social and political conflicts and their consequences, but also perception and interpretation, and fundamental structures. Whether it is possible to identify a European pattern, shared cultural or institutional strategies and learning effects beyond knowledge transfer must ultimately remain an open question, but comparable modes of interpretation and coping can definitely be observed for catastrophes in endangered regions such as the Alps and the maritime coasts (Media Link #b4). In any event, it is conspicuous that there is a certain tension between research on extreme natural events and the longue durée perspective which otherwise predominates in environmental history. These events display to the observer the eruptive, quick and violent aspect of nature, that which sticks out of the seemingly gently flowing stream of events. This requires an appropriate methodological response and must not result in a mere list of successive natural disasters.
The natural environment should be viewed as a central historical axis. It has its own significance and its own dynamic, which is worth researching. Without it humans cannot survive. Humans are fundamentally dependent on it, as they use it, acquire it, and exploit it. This should also be clear from the discussion above. In order to be able to do justice to, to understand and to explain historical contexts, we must not exclude nature and the environment. At the same time, both of these are inextricably interwoven with the three classical historiographical forces of rule (Media Link #b5), economy and culture (Media Link #b7). Consequently, this section refers back to a number of ecological aspects that have already been mentioned and discusses them.

Nature and the environment are not politics-free zones, quite the opposite. Frequently in European history, we encounter the political demand that a state or the territory of a ruler should strive to reach "natural borders" – both in the period of Louis XIV (1638–1715) (Media Link #b8) and repeatedly during the 19th century, the Rhine served this function between Germany and France, for example. Almost in a unique way, European history demonstrates that nature and the environment are fundamental factors in the process of state formation. For much of history, they were even decisive prerequisites for the rise and fall of rule. This applies to access to resources as well as to the location of centres of rule and the geostrategic control of territories. European history is full of examples, the Crimean peninsula is just one among them. It is no coincidence that medieval castles are situated at elevated locations in the landscape where they can be seen for miles around and which make it very difficult for an enemy to capture them. It is no coincidence that questions of space are also questions of power. For example, hunting, which was referred to above in the context of human-animal relationships, is inextricably interwoven with the imposition, maintenance and symbolism of rule. In industrial modernity, states have declared their commitment to the protection of nature and the environment and have enshrined it in law at the national level and at the European level – whether the aim is to secure the natural foundations for life or to preserve, research and protect supposedly endangered nature in national parks. It can be noted that law-making and legal adjudication (Media Link #b9b) are central aspects of the interactions between rule and nature and the environment. Restrictions on access to woodlands and European environmental law since 1970 are two prominent examples of the juridification of the utilization of the environment and of environmental damage, which occurred from the pre-modern period onward. This state-driven juridification constitutes a common European feature.

Conversely, political conditions and societal systems have ecological consequences, whether intended or not: for example, slash-and-burn farming, communal landownership and the process of European expansion. Environmental issues usually become key political issues when access to, the use of, and the control of resources that are essential for life are involved. Environmental history has paid attention to statehood and politics from the beginning, not least because the state and village communes in Europe have always played a fundamental role in the treatment of nature and the environment. For example, environmental history has investigated the relationship between the state and industry, regulatory functions, relevant authorities and interventions, the relationship between politics and environmental social movements. In particular, these questions animated the first generation of European environmental historians in the 1970s and 1980s, who had a decidedly critical attitude towards the state's treatment of nature and the environment and who were critical of weak state intervention in industrial modernity. This interest arose in a phase in which the preoccupation with nature and the environment became an (inter-)state political issue of the highest order, which is of course not an exclusively European phenomenon, but was decisively influenced by the globalization (Media Link #bb) of environmental problems. On the ecological plus side, there is the strong position and the public services of many European cities, who played a leading role from the global perspective – not only in the construction of abattoirs, and gas and electricity works.

Many core problems are closely linked to the relationship between the fundamental element economy and ecology, not least the issue of a secure and lasting energy supply. Questions regarding energy and resources are not only crucial ecological issues, from timber-burning and water-powered, to coal-burning and oil-burning, and finally to atomic energy. For a long time, from an economic perspective the natural environment was viewed as a free supply that gave rise to no or only low costs in the production process and was not worth protecting for its own sake. Early environmental history in particular identified this as the dark side of human economic activity and viewed industry as a, or even the, ecological villain. This often formed the basis for narratives of exploitation and ruin. Stories of over-exploitation and pollution particularly in conurbations, where the ecological footprint of humans as a result of population growth, industrialization and consumption had had a particularly pronounced effect, were a common feature of this research. Even though these processes were an enormous strain on the environment, these early environmental historiographical efforts have proved to be all too one-sided. The spectrum of topics has broadened considerably and has gained a foothold in economic and company history. Infrastructures, recycling and the further utilization of refuse are just some of the more recent topics. Of course, this is not a specifically European history either. However, it should be noted that the system of managing woodlands in a sustainable manner is very much a successful European model that has had a far-reaching effect.
Fundamentally, every form of interpretation and appropriation, of speaking and writing about nature and the environment – i.e.,

everything that has been accumulated in the archives of society – must be viewed in its specific historical-cultural context. For example,
in the early years of environmental history many myths of environmentally-engaged ecological activists were deconstructed –
"untouched nature" and "wilderness" are just two of them. Numerous movements in history gave rise to their own images and

corcepts of nature, which became imprinted and still affect the perception of the landscape today.\textsuperscript{19} The increasing focus in

environmental history on questions inspired by cultural history has shown itself to be productive in many regards, not least because it is

not restricted to recent history. It has also become clear the extent to which even environmental problems are constructed and

symbolically loaded. This is demonstrated not least by the debate about so-called Waldsterben (forest dieback) in central Europe in the

1980s (\textsuperscript{20}).

Openness towards the popular cultural forms of protest of the new social movements and the functions of the media, which served as

a catalyst for knowledge and the controversy about nature and the environment, are also features of this environmental history with a

cultural historical influence. However, a visual history of nature and the environment is only in its early stages, though it holds great

potential, not only for recent history. Initially the press, and subsequently also the main and recreational medium of television, and in

recent times the internet accompanied the changes in ecological perceptions and awareness in Europe. Images that had a strong effect

on the public were already a central feature in the early stages of the animal welfare and nature conservation movements. The visual

depiction of environmental conflicts seems to be a quintessential feature of the social movement "environmental protections and

nature conservation". Where the perception and communication of environmental political problems is concerned, images

disseminated through the modern mass media have assumed enormous importance. In particular, the internationally active

environmental organisation Greenpeace rose from the 1970s onwards to a leading position in the ecological fraternity, not least

because its members were very adept at dramatizing environmental problems and disasters, and at concretizing them visually and

symbolically as a David versus Goliath struggle – a little rubber dinghy against a big oil rig (\textsuperscript{21}). Of course, this example

once again shows that Greenpeace and other environmental organizations are global players which are strongly anchored in (western)

Europe – no less, but also no more.\textsuperscript{21}

Questions of Periodization

It is worth noting again that natural processes and cycles usually proceed at a different speed than the processes and events of human

history – for example, the unfavourable climatic phase from the late-medieval period to the 19th century (the so-called Little Ice Age),

the rotation period of trees or the half-life of atomic waste materials. This commonly observable "long duration" not only helps to

explain why environmental historical research tends to investigate longer time periods, it has also resulted in modes of structuring the

past that deviate considerably from the classic political watersheds, and not just in European history. Since its beginnings, there has

been an observable focus in environmental historical research on modern and recent history. The reasons for this are various. The

research questions often relate to the present. Human interference in nature and the environment has increased enormously since

industrialization, resulting in immense damage. There are also more primary source materials for the more recent past. This presumably

partly explains why there are fewer environmental historical periodizations for antiquity and the medieval period. Studies on these

periods are often structured around the established political and social watersheds and merely draw attention to the intensification of

the utilization of land and resources, to the slow population growth as well as to the resulting spread of environmental damage, which

came nowhere near the levels of urbanized industrial modernity.\textsuperscript{22} An exception that is regularly cited is the thesis formulated in the

late-1960s by the medievalist and historian of science Lynn White junior (1907–1987) (\textsuperscript{23}), who argued that

environmental exploitation has a fundamental western and Christian aspect to it. He identified the emergence of Christianity as the

cause of the ecological and societal crisis of his time. White argued that, in contrast with the cults of classical antiquity and Asian

religions, the Christian understanding of humans as the pinnacle of God's creation encouraged humans to ruthlessly exploit nature,

which they viewed as being subordinate to themselves. Thus White viewed the solutions to the problems as lying not in further

technological and scientific discoveries, but rather in a spiritual reversion to the teachings of Francis of Assisi (1181/82–1226) (\textsuperscript{24}), who taught that all God's creatures were of equal value.\textsuperscript{25} Many examples of ruthless pre- and non-Christian exploitation of

nature and environmental destruction and also examples of Christian-inspired preservation have long since disproved this view.

Individual events and people who are relevant to environmental history do not seem suitable as reference points, even though they

had far-reaching, in some cases global consequences, such as the earthquake of Lisbon (1755) (\textsuperscript{26}), the eruption of

Mount Tambora (1815) and the nuclear accident at Chernobyl (1986). It is thus not possible to determine exact turning points in the

history of the relationship between humans and nature. Instead it is possible to discern phases, which are medium term or longer in

duration, of generally gradual, but fundamental and lasting change in the whole of society, and which are usually not limited to

Europe.\textsuperscript{27} It should also be noted that environmental historical turning points vary considerably depending on the focus chosen. Just

taking some of the basic elements linked to this overview – for example "woodland", "soil" or "climate" – the different periodizations
already become apparent, which admittedly do not represent specifically European watersheds, but are mostly determined by national developments and variations, or are more global in scale. One such global historical perspective is the suggestion of the Dutch meteorologist and Nobel Prize winner Paul J. Crutzen (*1933) (Media Link #bh) that a new geological historical and climate historical era began in the 19th century, the Anthropocene. This suggestion flows from the observation that modern humans have become a fundamental factor in climatological, geological and atmospheric processes. The Deutsches Museum in Munich has devoted a long-running special exhibition to the concept of the Anthropocene, supplemented by a range of online resources.25

In spite of the limitations referred to, it is nonetheless necessary to mention a number of fundamental turning points that are part of the basic historiographical configuration of the preoccupation with nature and the environment, even though individual aspects remain the subject of debate. From the perspective of natural resource history, a distinction has been drawn between a solar (wood-burning) era and a fossil fuel (initially coal-burning, subsequently hydrocarbons) era, which marks the divide between modern industrial societies and preceding societies. Many environmental historians have become accustomed to differentiating between the hunter-gatherer era, as a non-modelled solar energy system, and the subsequent modelled solar energy system of agrarian societies. Both had in common that they were based on an energy supply that was almost exclusively limited to biomass, and animal and human muscle power. We are more likely to find specifically European aspects in the transition to the industrial energy system. It has even been described as a separate European path.26 This is of course an overstatement. The easy availability of resources played an enormous role in the course of this seismic shift, explaining why this transformative process that began in England and gradually encompassed the whole continent was more of a region than a national one, let alone a pan-European phenomenon. Industrialization began and progressed most quickly in places where the fossil energy carrier coal could be easily accessed and extracted on the surface or at a shallow depth. Early-industrial environmental conflicts, which predominantly resulted from conflicts regarding usage, first manifested themselves in the direct vicinity of these regions. Intermediate turning points have added more detail to this very rough energy-historical typologization, most prominently Christian Pfister’s (*1944) (Media Link #bi) thesis of the "1950s syndrome". According to this, the consumption-oriented lifestyle finally established itself from the 1950s in the modern industrial societies, which manifested itself in a massive increase in land use and oil consumption, in mountains of refuse and in the release of pollutants.27 The epochal watershed that is the 1950s syndrome, which is primarily based on western and central European observations, again exhibits general global historical aspects.

Attempts at periodizations that focus on changes in the perception of nature and the significance of that perception, as well as the significance attributed to nature and society are also the subject of much debate. In the years leading up to and around 1800, many Europeans became very enthusiastic about "nature", among them Jean-Jacques Rousseau (1712–1778) (Media Link #bj), Johann Wolfgang von Goethe (1749–1832) (Media Link #bk) and Caspar David Friedrich (1774–1840) (Media Link #bm). A veritable cult of nature emerged. Romanticism and also the emerging natural sciences sought to discover the essence of nature (Media Link #bm). This also manifested itself in human-animal relationships. Humans became increasingly sensitive and broad-minded towards their sentient fellow creatures. While all of this does not make the decades around 1800 a clear turning point in environmental historical terms, particularly as this enthusiasm is far removed from our understanding of nature, it is nonetheless possible to speak of a "threshold period" – not just from an ecological perspective – which the contemporaries themselves perceived as a radical change.28 The beginnings of a modern approach to nature and the environment can be identified as early as the late-18th century. For the first time, woodlands close to cities gradually changed from being exclusively a source of timber to being places for respite and enjoyment. The fundamental socio-economic processes of that time that influenced all of Europe – liberalization, deregulation and commercialization – also had consequences for the treatment of nature. Woodlands and soils are examples of this. The emergence of the earliest environmental problems caused by industry accompanied this change.29

Similarly hazy, but no less recognizable is the change around 1900. Through the transition from agrarian to industrial states, which occurred first in western Europe, ecological problems took on a new and unprecedented dimension, which manifested itself particularly in the burgeoning urban centres of the continent. Without going into the many details identified by research in this area, refuse and smoke were a constant part of the daily lives of the city residents. One could feel, see, smell, taste and hear the environmental pollution. The movement for public hygiene, which featured Europe-wide connections, was a notable consequence of this. This was a shared (western) European phenomenon. Its primary concern was of course the health of humans and less the protection of nature and the environment. Notwithstanding the love of nature and of animals involved here also, movements for the protection of nature, heritage and the environment remained weak, were part of the reforming efforts of the time, and were not immune to the nationalistic tones that were typical of the period. This applies for example to the foundation in 1895 of the National Trust for Places of Historic Interest or Natural Beauty, which remains the foremost institution for the protection of monuments and nature in England. It was not until the 1960s and 1970s that the environmental movements emerged and the field of environmental
politics became established – the western European states and the USA played a leading role in this. This shift in the perception of the problems facing society has been aptly described by the Swiss environmental historian Patrick Kupper with his metaphor of the "1970s diagnosis". Even though he does not interpret this change as the beginning of a new era, these decades nonetheless marked a profound change, as concern about the environment reached an unprecedented level in politics and in society. Strong criticism of paradigms of progress and growth and recurring warnings of ecological disaster and horror also played their part, not least Dennis Meadows' (*1942) The Limits to Growth.

**Conclusion**

Do we encounter a European history here? A specifically European approach to nature and the environment in the historical perspective? There is little indication of this. Even the natural environments of Europe, if these include spaces, climate and resources, could hardly be more varied. Like almost no other subfield of our discipline, environmental history demands to be researched in global and transnational perspectives – on the basis of local, regional and national examples. Many results and trends, from natural and anthropogenic environments to the periodizations, impressively confirm the global trend in the historiographical treatment of nature and the environment. It almost seems that the slogan "think globally, act locally", which is so strongly rooted in the eco-movement, applies here too. It can also be noted that in the longer term perspective many new trends in the treatment of nature and the environment originated in (western) Europe. If one also looks at the legal and state side of the treatment of nature and the environment, then even with the greatest of caution – which has been even stronger in modern and contemporary history – it is possible to identify European commonalities. In particular, the juridification and to an extent the role of state and municipal institutions are examples of this.

Nils Freytag, Munich

**Appendix**

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Notes

3. Arndt, Umweltgeschichte 2015. European comparative perspectives can be found intermittently in Uekötter, Deutschland 2015. For a consistently European perspective on urban-environmental history, see Schott, Urbanisierung 2014.
5. For more details on this, see Herrmann, Umweltgeschichte 2013, pp. 27–42.
7. Uekötter, Umweltgeschichte 2007, p. 3. For the other position, see Winiwarter / Knoll, Umweltgeschichte 2007, particularly pp. 14–16 and chapter 5. For a more balance argument, see Reith, Umweltgeschichte 2011, pp. 2f.
8. On this perspective in general, see Schlogel, Raume 2003.
9. For more details on this, see Küster, Landschaft 1995.
15. Rather than listing many references, see Lübken, Natur 2014 (who cites further literature) and Pfister, Learning 2009.
16. Wolfram Siemann and I suggested this around ten years ago: Siemann / Freytag, Umwelt 2003.
17. Most recently the example of the Swiss National Park: Kupper, Wildnis 2012.
18. Instead of many references, see the following with regard to the European city: Bernhardt, Umweltprobleme 2001.
20. See Bemm, Vegetation 2012.
21. Most recently on this, see Zelko, Greenpeace 2014.
22. Thommen, Umweltgeschichte 2009, pp. 131–133. In medieval studies, there remains much work to be done, at least according to Schenk, Mensch 2008, p. 51.

23. White, Roots 1967. For Joachim Radkau, this is a "Gründertext der Umweltgeschichte" (foundation text of environmental history), Radkau, Ära 2011, p. 125 and elsewhere.


27. See Pfister, Energiepreis 2003; Merki, Epochenschwellen 2009.


30. For a more recent, consistently international perspective on this, see Schulz-Walden, Umweltpolitik 2013.

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Link #ab

Link #ac
- Jakob Johann von Uexküll (1864–1944), Umwelt und Innenwelt der Tiere, 1909

Link #ad

Link #ae

Link #af

Link #ag
- Georges Louis Leclerc Buffon (1707–1788), Histoire naturelle, 1789

Link #ah

Link #ai

Link #aj
Breakfast: Miner with Pit Pony and Cat

Link #ay

Left Profile of Joseph Merrick (“Elephant Man”), 1886

Link #az

Link #b0

Link #b1

Link #b2
- Plaque Commemorating the Introduction of the Potato in Württemberg

Link #b3
- Commemoration of Famine emigrants in 1997

Link #b4
- Groyne at Mundesley (Norfolk, Great Britain)

Link #b7

Link #b8

Louis XIV of France (1638–1715)

Link #ba
• Law (http://www.ieg-ego.eu/en/threads/backgrounds/law/martin-otto-law)

Link #bb

Link #bc
Waldsterben (Forest Dieback) in the 1980s

Link #bd
Greenpeace Resists the Sinking of the Brent Spar Oil Rig in 1995

Link #be

Link #bf

Link #bg

Link #bh

Link #bi

**Link #bj**

• Jean-Jacques Rousseau (1712–1778) VIAF [Link](http://viaf.org/viaf/100184045) DNB [Link](http://d-nb.info/gnd/118603426) ADB/NDB [Link](http://www.deutsche-biographie.de/pnd118603426.html)

**Link #bk**

• Johann Wolfgang von Goethe (1749–1832) VIAF [Link](http://viaf.org/viaf/24602065) DNB [Link](http://d-nb.info/gnd/118540238) ADB/NDB [Link](http://www.deutsche-biographie.de/pnd118540238.html)

**Link #bl**

• Caspar David Friedrich (1774–1840) VIAF [Link](http://viaf.org/viaf/12145857793223021180) DNB [Link](http://d-nb.info/gnd/118535889) ADB/NDB [Link](http://www.deutsche-biographie.de/pnd118535889.html)

**Link #bm**


Caspar David Friedrich (1774–1840), Inside the Forest under the Moonlight, ca. 1823/1830

**Link #bn**

• Dennis Meadows (*1942) VIAF [Link](http://viaf.org/viaf/41907624) DNB [Link](http://d-nb.info/gnd/119550911) ADB/NDB [Link](http://www.deutsche-biographie.de/pnd119550911.html)

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