



# Introduction

Catherine Evtuhov, Julia Lajus, David Moon

From the vantage point of his Californian exile, looking out over the San Francisco Bay, the Polish poet Czeslaw Milosz experienced mostly discomfort from his “forced confrontation with nature.” The inability to escape into a private cocoon, protecting him from the “violated but always victorious expanse,” made him feel “stripped and destitute,” diminished and near-nauseous, having achieved nothing.<sup>1</sup>

Strangeness, indifference, eternal stone, stone-like eternity, and compared to it, I am a split second of tissue, nerve, pumping heart, and, worst of all, I am subject to the same incomprehensible law ruling what is here before me, which I see only as self-contained and opposed to all meaning.<sup>2</sup>

As a coastal California native, I remember well the shock I experienced in reading Milosz’s essay in the early 1980s. For me, equally subjectively, I can imagine no more calming experience than standing on the bluff, contemplating the vastness and majesty of the Pacific Ocean: if the bustle of human affairs seems therefore diminished, this can only be a positive moment, and puts any troubles into their proper perspective. The point of this reflection being: if indeed “I am here” (the opening words of Milosz’s book of essays), and this “here” involves nature, the “here” can be anywhere. Without making absurd claims that the Pacific Ocean, the Sahara Desert, the Siberian taiga are “the same,” it remains the case that the human encounter with nature is universal. When I am hiking in the Rocky Mountains, I experience the aspen groves, the wildflowers, the pine trees, the fast-flowing creeks and majestic crags quite as I did in the Altai Mountains—on the map the little pocket where Russia meets Mongolia, Kazakhstan, and China. This sort of international wandering is of course a privilege of, say, a university professor with access to air travel. But the observation remains valid: everywhere there are humans, there is by definition “nature,” and it is only in interaction with their immediate surroundings that humans feed themselves, establish their habi-

tations, and shape their own environment. So my perspective is unabashedly more optimistic than Milosz's.

## **The Universal and the Particular in Environmental History**

Russia's history, whether in European or global context, has suffered more than many from exceptionalism, prejudice, mystery, and misunderstanding. While the specialized field of Russian history is extremely sophisticated and has been highly developed for centuries, the ability to communicate (in part due to linguistic issues) across disciplinary boundaries remains weak. It is our premise that environmental history—which has burgeoned for the geographical space of the former Russian Empire and the Soviet Union over the past two decades—is uniquely positioned for this task of integration. Because forests, rivers, soils, and geological formations are universally comprehensible, a writing of history that focuses on humans in their interaction with these and many other natural factors has the advantage of general accessibility. We hope that the history of this space can, through the pursuit of environmental history, be liberated from tropes of “us and them,” “Russia versus the West,” a special penchant for autocracy, paradigms of backwardness, and so forth. The chapters in this book take as their point of departure questions and situations that are readily recognizable to historians of absolutely any geographical location—the uses of natural resources in the process of transforming nature into environment with all degradation and pollution related to it, the manner in which industrial development was inscribed in local environments and affected by them, interactions between humans and nonhuman species, and efforts to protect the environment from overexploitation and pollution. In studying this common human endeavor, we hope to present some aspects of society, governance, and economic development in ways that make sense to readers outside the specialized Russian history field and integrate this (until relatively recently) “blank spot” on the map into the larger landscape of environmental history.

There is no question that the territory of the former Russian Empire and the Soviet Union has been the scene of major environmental disasters and widespread environmental degradation that have been caused by the inhabitants and their governments. Nor is there any doubt that human and environmental health has been sacrificed to other priorities. What can be questioned is the extent to which these states were extreme outliers from the experience of other parts of the planet. Environmental historians have debated, and will continue to debate, the impact of different political and economic systems on the environment. Were communist regimes especially harmful in comparison with capitalist regimes? Recently, Andy Bruno described the Soviet government's dualistic approach toward nature, where conquest and assimilation went hand

in hand, and proposed that damage wrought by the communist regime was comparable to that brought about in the capitalist world.<sup>3</sup> But answering these questions fully will require further detailed comparative studies that draw on research by historians of all parts of the world.<sup>4</sup>

Another angle from which to consider whether there is anything exceptional to Russian and Soviet environmental history is to consider the environments of this part of the world. There is a long tradition, dating back to at least the eighteenth century, of making a direct, causal connection between the relatively harsh natural environment of much of the center of the Russian state around Moscow and to the north, as well as Siberia to the east, and the authoritarian political systems and denials of individual freedoms that have characterized much of its history.<sup>5</sup> In comparison with the lands to the west in Europe and far to the south and east in Asia, much of these lands have long, cold winters; short, hot summers; slightly lower rainfall; and infertile soils. Vast distances have been compounded by problems of transport, especially when autumn rains and spring thaws turn roads into seas of mud. The main rivers flow away from, rather than between, centers of population, and many mineral resources are located in remote regions. To extract a living from this environment, it is argued, the rulers, first tsarist, then communist, concentrated power in their hands and imposed systems of forced labor, such as serfdom, collective and state farms, and labor camps, on sections of the population. To acquire and hold on to lands with environments more favorable for human activities in the fertile steppes to the south and southeast and along the Baltic coast to the northwest, the regimes mobilized what resources they had and imposed further burdens on their populations in order to defeat militarily powerful neighboring states, such as the Mongol, Ottoman, and Swedish Empires in tsarist times and Germany in the twentieth century. The tsarist and Soviet regimes also had, it is claimed, an especially harsh attitude to the natural environment that they exploited for short-term needs rather than longer-term sustainability.

Such environmental-determinist arguments cannot be dismissed: in many but not all territories of the Russian Empire and the Soviet Union the climate and conditions for agriculture are indeed harsher than in many other parts of world, and the regimes have ruthlessly exploited their populations. But to take such arguments too far denies human agency and capability to devise strategies to sustain themselves and their states, and to develop rich cultures. It has been argued elsewhere that inhabitants of these lands have made their own histories and constructed their own identities in processes of interaction with the land and environment they have lived in.<sup>6</sup> The cultures that have developed in the Russian and Soviet states have included innovative ways of understanding the “natural” world, humans’ part in it, and interconnections between the component parts of the environment.

## Environmental Thinking in Russia and about Russia

In turning our attention to human-natural interactions and environmental history, we inscribe our research in a long tradition of fascination or even obsession with the natural environment. The expanses of Russia and Siberia have historically been sparsely populated, arguably prompting an inevitable encounter with natural forces. As in many cultures, animals, trees, forest sprites, mineral fairies, and talking rivers are omnipresent in Russian literature, from the Igor Tale through Aleksei Ivanov's contemporary Urals adventures.

In the seventeenth century, cartographers produced a variety of local and regional maps and charted the state's expanding domains;<sup>7</sup> scientific description and detailed studies of nature over this vast territory burgeoned during the eighteenth century, when the imperial state invited European explorers and naturalists to help it to learn its own geography and natural riches. The vast and diverse lands of Russia and Siberia needed to be mapped and described, their riches inventoried and classified. Peter the Great's curiosity whether or not the lands under his possession merged into the American continent prompted a program of exploration in the Pacific known as the Kamchatka Expeditions. Siberian and other northern lands provoked special interest among European scientists who put them on maps and described exotic animals, including documenting the very first known extinction.<sup>8</sup> Under Catherine the Great, the expeditions organized by the Imperial Academy of Sciences were also mostly by foreign naturalists like Peter Simon Pallas (1741–1811) and Johann Friedrich Gmelin (1748–1804), and these continued and deepened the inventarization of the territory that later on attracted such internationally known explorers as Roderick Murchison and Alexander von Humboldt. Murchison gave the name "Permian" (after the Urals province of Perm') to the geological period in the stratigraphic system between the Carboniferous and Triassic periods. At this moment, naturalists from the Baltic provinces of the empire deepened the study of nature from the maritime and northern peripheries to the open ocean—an endeavor that gave a strong impetus to the development of natural sciences in Russia. Adam Johann von Krusenstern (1779–1846), Friedrich Benjamin Graf von Lütke (known in Russian as Fedor Litke) (1797–1882), Karl Ernst von Baer (1792–1876), and Alexander von Middendorff (1815–1894), among others, laid the foundation for the understanding of nature of the empire as a part of the globe. At the same time, they played to imperial geopolitical and economic interests by describing new lands and resources and mapping them for their future exploitation by the state. It is important to remember this transnational origin of the study of nature in the Russian Empire when discussing the exceptionalism and universalism of its environmental history.

If anything, the intellectual and scientific focus on the environment only increased during the apex of the imperial period, in the nineteenth century. Suffice it to note here two specific nature-focused intellectual orientations that can have much to contribute to the present-day writing of environmental history. The first is philosophical: the influential philosophers Vladimir Soloviev (1853–1900), Nikolai Fedorov (1829–1903), and Sergei Bulgakov (1871–1944), in particular, evince a strong environmental strain in certain of their writings. Their concerns included a fear of erosion and encroaching sands from the East, efforts to create artificial rain, and a general theory of economic life as contingent upon the relation between humanity and nature.<sup>9</sup>

Second, and of more immediate relevance to the present volume, are the environmental sciences of the nineteenth century, by which we mean soil science, agronomy, climatology, and chemistry. What are the ways in which these scientific endeavors qualify as “environmental”? Let us cite just three of the most important examples. Vasilii Dokuchaev (1846–1903) is generally known as the founder of the discipline of soil science, along with Eugene Hilgard (1833–1916), a German-born American scientist working in California. Thanks to Dokuchaev, the vocabulary of international soil science relies on Russian terms such as the *chernozems* (the fertile black earth), *podzols* (soils under coniferous forests), and *solonchaks* (saline soils).<sup>10</sup> Dokuchaev made the crucial breakthrough of studying the soil as an organic system, in which not only the visible topsoil but the many layers of subsoils must be taken into account in their interaction in evaluating the viability of particular territories for agriculture and understanding their susceptibility to erosion. To Dokuchaev also belongs the now ubiquitous classification of natural soil belts circling the globe, permitting, for example, a direct comparison and juxtaposition of the Eurasian steppes and the North American Great Plains.<sup>11</sup> A second figure, extremely influential in his day but oddly underappreciated in our climate-obsessed times, is the meteorologist Alexander Voeikov (1842–1916). Voeikov’s foundational *Climates of the Earth* (*Klimaty zemnogo shara*, 1884) and *Winds of the Globe*, sponsored by the Smithsonian Institute and published in English, established climatology as a discipline. A pathbreaking study investigated the effects of the snow layer on soils, climate, and weather.<sup>12</sup> Voeikov was also a pioneer of “wellness,” studying and participating in the creation of health resorts (*Kurort*) in the Caucasus and heading the St. Petersburg Society of Vegetarians. A far more familiar name is that of Dmitrii Mendeleev (1834–1904). It is important to note that the periodic table itself emerged, like Dokuchaev’s soil science, from Mendeleev’s immersion in the manifold issues raised by the agricultural questions that followed upon the Great Reforms of the 1860s, and his subsequent work with the Russian Technical Society (Russkoe tekhnicheskoe obshchestvo, RTO).<sup>13</sup> The deep roots of environmental thinking, into

the nineteenth century, created the milieu for by now better-known figures like Konstantin Tsiolkovsky (1857–1935), a student of Fedorov, and Vladimir Vernadsky (1863–1935), investigator of the noosphere.<sup>14</sup>

## The “McNeill Gap” and How It Is Being Fixed (or Not)

This present volume in English shows how far “Russian environmental history” has come over the past couple of decades. In 2008, a collection of translations to Russian of classical works on various topics in environmental history was published by scholars at the European University in St. Petersburg and the Max Planck Institute of History in Germany. The volume, which included an introduction on “environmental history” (*ekologicheskaiia istoriia*) by the editors, was intended to promote what was then a relatively new field of history in Russia.<sup>15</sup> The translated essays included a survey of the field of environmental history globally by John McNeill that had been published in English in 2003. McNeill noted the underdeveloped state of research on Russia:

Historians of Russia (both Russians and foreigners) have yet to go far exploring environmental history approaches, which in Russian history offer tremendous possibilities. . . . Exploiting [the] . . . sources will be painstaking work, to be sure, but the rewards of bringing an environmental approach to Russian history should be sufficiently alluring. The sweep of Russian frontier expansion, the compressed drama of Stalinist industrialization, the grandiose replumbing of Soviet Central Asia among other themes cry out (at least I can hear them) for the attention of environmental historians.<sup>16</sup>

In recent years, environmental historians—from outside Russia but also in growing numbers from Russia—have researched, analyzed, and debated the topics listed by McNeill and many more. A full survey of the growing field of “Russian environmental history” is beyond the scope of this introduction, but a good sense can be gained from Julia Lajus’s comprehensive review published in 2018, alongside a shorter review of a smaller field by Andy Bruno a decade earlier.<sup>17</sup> More recently, reviewing books on such different subjects as a history of frozen earth (permafrost), an environmental history of the Carpathian Mountains in neighboring Ukraine, and a history of Russian national parks,<sup>18</sup> Christopher Ely begins by echoing McNeill’s anxiety about the slow development of “Russian environmental history,” but then undermines it by asserting that “post-Soviet environmental history has achieved a reach and level of sophistication comparable to that of other regions.”<sup>19</sup> Stressing “place” as the dominant organizing concept of a recent book of essays titled *Place and Nature*, which takes different but complementary methodological approaches,

he uses the metaphor of a platypus, arguing that, nevertheless, “like the Australian mammal [the book] still manages to function effectively.”<sup>20</sup> There has been a growing Russian-language literature on environmental history, represented in English in international journals such as *Global Environment*, *European History Review*, and *Water History*,<sup>21</sup> in addition to journals in Russian and Soviet studies.<sup>22</sup> Journals published in Russia have begun to include papers on environmental history, particularly as it enters into dialogue with other fields of history: economic history, history of medicine, urban history.<sup>23</sup>

Environmental historians of the Russian and Soviet lands are broadening the geographical scope of the field by paying more attention to non-Russian territories that were once governed from St. Petersburg and Moscow, such as Ukraine and Central Asia. Further, environmental historians of this part of the world are taking transnational and comparative perspectives that challenge notions of its exceptionalism. They are presenting more nuanced interpretations by comparing the development, application, and impact of technologies at a global level, along with Indigenous knowledge in colonial contexts, and analyzing intercontinental transfers and exchanges of people, biota, and knowledge.<sup>24</sup> Our book offers a contribution to this burgeoning field by presenting detailed research on what may be considered the “core” territories of the former Russian Empire and Soviet Union, including Siberia. Among the locations in our purview are not only the Russian North and Volga region but the Urals and Western Siberia that are less well-known to international audiences than their global significance merits. For example, the Khanty-Mansi National/Autonomous Okrug—the regional focus of Evgenii Gololobov’s and, partly, Valentina Roxo’s chapters in this book—has been a major center of the booming Soviet and Russian oil industry since the 1970s, yet its name remains unfamiliar even to many historians, let alone readers of the media.<sup>25</sup>

Despite these developments in Russian and Soviet environmental history, readers who seek to learn about them from works on global and world environmental history written in English by specialists on other parts of the world would remain largely in ignorance. Many such works of synthesis have paid relatively little attention to the Russian and Soviet worlds, which is surprising since the tsarist, Soviet, and post-Soviet Russian states were, and are, the world’s largest by area, if not population. As McNeill indicated, moreover, they offer rich scope in research topics of global significance. When considering Europe and Asia, global and world environmental histories have paid far more attention to Western Europe and the east and south of Asia rather than the center—or “heartland” to use Halford Mackinder’s term—of the entire Eurasian continent.<sup>26</sup> This is not to deny the importance of the Eurasian peripheries, of course, but to point out that an understanding of global or world environmental history is incomplete without due attention to continental interiors.

There are various explanations for these emphases, or perhaps distortions, as well as for the relative neglect of Russian/Soviet environmental histories in Anglophone global or world histories. Most of the authors do not have the language skills to read primary sources or scholarly studies in the languages of the region. They have tended to rely on often older works in English and other Western European languages. They have been influenced, consciously or subconsciously, by negative stereotypes and prejudices about these lands and their people, that long predate the communist regime and stretch back into early modern Europe. These can be readily tested by asking a random selection of people in the Western world for their instinctive reaction to the phrase “Russian environmental history.”<sup>27</sup>

When Anglophone works on global and world environmental history do consider the cases from the Russian Empire or the Soviet Union, they have tended to present a one-sided or distorted picture that uses them as examples largely of wholesale destruction and pollution of the environment. The environmental history of this part of the world is presented in such works mainly as a list of anthropogenic disasters, such as: the desiccation of the Aral Sea as water from the rivers that feed it was diverted for irrigation; the Chernobyl nuclear power station explosion caused by design flaws and human error; threats to the pristine waters of Lake Baikal from cellulose plants built on its shores. It could have been worse. A global environmental disaster was averted by a decision by the Soviet leadership in the late 1980s to cancel plans to divert rivers flowing into the Arctic Ocean to arid regions in the south of the Soviet Union. These are just the headline cases. Rapid industrialization in the Soviet Union from the late 1920s caused massive pollution of the environments the workers and wider population lived in. Free-flowing rivers such as the Dnieper (Dnipro), Don, and Volga were converted to chains of stagnant lakes by dams to provide hydroelectric power and water for irrigation. Blame for this environmental degradation is attributed to wasteful and ill-considered exploitation of natural resources by authoritarian states, tsarist and Communist, that prioritized economic development and state needs over the health of their environments and populations. These states compounded their sins by thwarting nascent environmental movements. The chapters in our book do not seek to deny this negative history but offer more nuanced interpretations that present the environmental history of this part of the world in similar terms to environmental histories of other parts of the world.

## “Environment as History”: Humans in Nature

Like most environmental historians, the authors of the present volume share a concern not for the history of the environment as such but specifically, and in



each particular instance, for the ways in which human behavior is imbricated in nature. To put it more simply, it is the ever-present *interactions* between “humans” and “nature” that interest us. This is not an empty statement, and it is indicative of one among many emerging new strands in Russian environmental history. Two recent monographs approach such interactions from the angle of animals, water, and regions that were peripheral to the centers of political power in the Russian and Soviet states. Bathsheba Demuth’s *Floating Coast*, which examines both the Siberian and Alaskan sides of the Bering Straits, takes up the perspective of the walrus and the whales and becomes, as Sophie Pinkham puts it, “history from the vantage point of the sea; political treaties and trade agreements, monarchs and presidents flash by on the periphery, as if seen from far away.”<sup>28</sup> In a different example, Maya Peterson’s recent history of the Aral Sea basin in Central Asia argues that the groundwork for its desiccation in the Soviet period was laid by the irrigation networks of the nineteenth century that diverted water from the rivers that fed it. Her book thus proposes continuities as well as ruptures in policies and attitudes toward the environment between the imperial and the Soviet regimes.<sup>29</sup> In both Beringia and Central Asia, however, plans to manipulate environments devised in the imperial period were implemented so much more strongly and with so far greater consequences after 1917 as to make them an entirely different project. Both of these books offer revealing perspectives from politically peripheral regions of the Russian Empire and Soviet Union, where the environments posed serious challenges to the designs of the central governments but were vulnerable to the consequences when such designs were realized. These new approaches are welcome as “Russian environmental history” explores a variety of methodologies. Along this spectrum, our book comes down firmly on the side of human history. Each of the chapters in this book, which offer viewpoints from a wide range of regions and different time periods, takes up a particular situation that has long been acknowledged as a significant historical question and explores the ways in which focus on the environment can illuminate new aspects.

Environmental historians are interested to understand how economic development was inscribed in the environment, namely how it transformed “nature” into “environment” through technology in the process of “environing.”<sup>30</sup> This methodology, which permits us to distinguish “nature” from “the environment,” has been applied to the *longue durée* history of the Solovki Islands in the Russian North.<sup>31</sup> Readers of this volume may find that this methodology presents a framework to understand the developments analyzed. Thus, careful differentiation between “nature” that is perceived ahistorically in spiritual and scientific practices and the “environment” that is an actor and a result of historical transformation by means of available technologies helps to build more nuanced multifaceted narratives of human relations with the planet and with

other forms of life. For Russian environmental history, the need for “deeper analysis of attempts to inventorize the considerable riches of its land, water and marine resources, and parallel initiatives directed towards gaining greater understanding of the inner workings of the natural world and associated processes”<sup>32</sup> has already been declared several times. It has been accompanied by a hope of understanding the “sophisticated system of natural resource management embedded in the country’s regional and local economies.” Several of the chapters in this book will help to fulfill this task, but others serve to broaden the scope of research into less developed aspects than natural resources or pollution.

Rather than seeking something specific about the environmental history of the Russian and Soviet lands—either in the alleged malign influence of its harsh environment on the people and political regimes that have made their homes there or in the supposed equally malign influence on the environment of these people and their states—the overall tone of the chapters in this book taken as a body of scholarship suggest a multifaceted interrelationship between “nature” and “culture.” Together with many environmental historians of other parts of the globe, those working on the Russian/Soviet space have been moving away from a sharp distinction between the more-than-human and human worlds. Rather, they focus on entanglements between human societies and the environments of which they are a part and coevolution rather than humans being obstructed by or conquering and degrading the “natural world.”<sup>33</sup>

## **How Focusing on Environment Changes Historical Chronologies**

An environmental perspective provides interesting new boundaries and chronologies for the practice of history. For example, the concept of the Anthropocene as a distinct period in geological time highlights the incipient exploitation of fossil fuels, beginning in the 1780s, as a decisive moment of change, in some ways coinciding with what global historians like to describe as the emergence of the modern world.<sup>34</sup> The chapters in our volume explore the potential of these new chronological landmarks for the writing of history of the spaces of the former Russian Empire and part of the Soviet Union (mainly the territory of the Russian Soviet Socialist Republic), but even more for inscribing this history in the larger landscape of human-natural interactions. Thus, several of the chapters are concerned with mapping industrialization in these territories onto the better-known (in the English-language literature) scenarios of massive industrial production that followed the concerted exploitation of coal resources in the late eighteenth century and movements of protest against industrial pollution by the end of the nineteenth. Some historians date the beginning of the Anthropocene to the 1950s. Some further chapters can be

read in this context, focusing on the displacement of local fishing and hunting industries by the unprecedented massive exploitation of oil and gas resources in the 1960s and 1970s, or efforts by local activists to limit the degradation brought about by development of wetlands and large-scale drilling. The Soviet drive to use—and also to protect—natural resources corresponds in time to a parallel intensification in other parts of the world, and can productively be juxtaposed in order to complete our picture of the special, intensive, aggressive assault on natural resources that characterizes the post–World War II era. In short, environmental history gives us the tools to move beyond exceptionalisms and Sonderwegs, posing questions in a universal language that permits us to situate events and movements in a global context.

So far, the literature on Russian, Soviet, and Eurasian environmental history has largely focused on the late imperial and early Soviet periods. Our book expands this chronological scope, devoting attention to the seventeenth and eighteenth centuries as well as the late Soviet period and beyond.

## Environment and Social History

Our wish to integrate the environment into the historical narrative has implications for social history as well. How does focus on human-natural relations change our understanding of social interactions? Several of the pieces in the volume (Vinogradov, Mazanik, Bruisch, Roxo) allow us to shift our focus from the familiar state-versus-society model to the specific strategies and negotiations among local groups and forces. We needn't wander around with our lighted torch in broad daylight, seeking evidence of "civil society," as a previous generation of American (and German) social historians frequently did. Instead, looking at images of, and protests against, the pollution of the Volga in the late nineteenth century shows us in a manner completely devoid of ambiguity how local citizens formed associations, negotiated with factory owners, strategized and compromised, and ultimately shaped outcomes. What comes to the fore, then, is not an a priori opposition between state and society but the multiple interstices in which individuals and groups operate, and the conflicts and interactions of local powers at many different levels.<sup>35</sup>

An important recent volume on Eurasian environmental history asserted, and we agree, that historians discover innovative professional tools and different types of sources when they include environment in their narratives.<sup>36</sup> Moreover, these new tools are instrumental not only for environmental history itself but for the deep, multilayered understanding of history in general. The central question of historical enterprise is a question of power; environmental history is not an exception. Thus, the authors of this book make a significant contribution to ongoing discussions on imperial geographies<sup>37</sup> and the "nature

of Soviet power.”<sup>38</sup> As Douglas Weiner put it, “Appreciation of the saturation of history and knowledge with questions about power give us the most powerful tool to reconstitute the ‘environment’ as a central and prepossessing category of analysis.”<sup>39</sup> If we agree that behind any configuration of the environment is a social agenda—and we would like to note that the need for environmental history to be engaged more fully with social and political theory has already been declared<sup>40</sup>—then we should emphasize that through the studies of how environment was constructed and perceived, of what kind of relations between human and nonhuman actors evolved in the history of Russia and the Soviet Union, we would much better understand the power relations, the economic successes and pitfalls and their costs, and the social and cultural transformations of society. It might even be said that this approach actually embodies the urge for the “greening” of social and labor history by incorporating environmental issues and nonhuman actors into the historical narrative.

The authors turn their attention to state authorities and experts, but also to less obvious and visible historical actors: monks, traders, workers of the chemical industry, Indigenous people, peoples’ controllers who—some readers may be surprised to learn—were on the side of rational environmental policy in the 1970s, and many others.

In addition, this type of history also highlights the unrealized scenarios, the possible futures that never became. What if camel breeding had continued to be a significant part of Russian husbandry, if Indigenous fishing and hunting activities had not become a victim of oil and gas production, or if this oil and gas economy had not flourished . . .

## **The Project and the Chapters**

The volume we wish to present is just one piece of a multilayered long-term collective project involving the authors represented here but also many other participants. Our endeavor has been deliberately international, involving scholars from the Russian Federation and Ukraine; other parts of Europe, including the United Kingdom; and the United States. Our collaboration began at international conferences devoted to environmental history<sup>41</sup> and Russian, Eurasian, and East European area studies<sup>42</sup> in Europe and North America over a decade and a half ago. We moved from presenting panels at conferences to organizing our own meetings, for example at Georgetown University in 2009 and, in particular, at the European University and the Laboratory for Environmental and Technological History at the Higher School of Economics in St. Petersburg. Some of our meetings have been parts of larger projects, including an international network supported by the Leverhulme Trust in 2013–16 that funded conferences, workshops, and field trips in St. Petersburg,

Solovki, Irkutsk and Lake Baikal, Perm, Ekaterinburg and other locations in the Urals, and Kyiv and Chernobyl' in Ukraine. In the course of our work, we have broadened our circle of "Russian environmental historians" to include scholars who are or have been based at Elabuga in Tatarstan and Tiumen' and Surgut in Western Siberia. The broad geographical backgrounds of our authors and the wider group, both within and without the territories of the former Russian Empire and Soviet Union, is essential to our understanding of their environmental history. Our collaboration has led to a number of joint publications.<sup>43</sup> This present volume complements another edited collection, *Place and Nature*,<sup>44</sup> that focuses on the locality and the need for an integral approach to environment in a circumscribed space. This second book mirrors the first by reflecting more strongly the universalizing aspects of our endeavor, and provides some examples of ways in which the story of the Eurasian space may be "made familiar" to students of other geographical regions.

The chapters in this book are representative of the broad range of current work on the environmental history of the Russian Empire and Soviet Union. They explore ways in which humans in this part of the world have conceived, managed, and sought to change their role in the wider environment. They also reflect the growing variety of subjects investigated by environmental historians. There are chapters on important topics of long-standing interest, such as pollution and environmental movements. The use of natural resources features prominently. And attention is given to subjects that have attracted more notice in recent years, such as animals and wetlands. The environmental humanities are represented in a chapter on the impact of human activity on the environment through the eyes of a Russian artist. Readers can also compare the approach of a historical geographer with those of environmental historians. The scope of the chapters ranges from the vast territory of the former Russian Empire and Soviet Union in its entirety to case studies of particular regions. The regions investigated echo the diversity of the lands that have come under Russian and Soviet rule or domination, including the White Sea in the north, the Volga River and basin, the Ural Mountains, and Siberia. From the perspective of time, the chapters consider periods from the early modern era to the present day.

How did management expertise contribute to the exploitation of natural resources in the Russian Far North in the early modern period? What was Russia's role in early industrialization on the eve of the emergence of the fossil fuel economy? How was environmental degradation reflected in nineteenth-century art? What role did pollution play, and what were responses, in late imperial Kazan? What was the interaction between intensive oil and gas exploitation and Indigenous industries in the extraction centers of Western Siberia? How did camels become a factor in the agriculture of European Russia? What was the place of animals in the creation of a public health system in imperial Russia? What measures did the Soviets take to preserve wetlands,

and how did environmental protest accompany the oil industry in the 1970s? How does taking environmental factors into account contribute to our framing of empire? Finally, what can we learn about the Russian/Norwegian border through exploration of environmental issues and tourism?

## Conclusion

One of the purposes of the present volume is to showcase a selection of recent studies by specialists on the region who have the requisite linguistic skills, access to sources, and deep familiarity with its environment, history, and culture. It should be noted that the selection is not distorted to present only “negative” or “positive” stories. The chapters deliberately include detailed analyses of exploitation of natural resources and pollution, as well as cases of people showing agency in articulating concerns about environmental degradation that are among a range of topics of interest to environmental historians of other parts of the globe. The better integration of the Russian and Soviet cases into world and global environmental history would allow scholars to test the recent assertion by Pey-Yi Chu: “A growing body of scholarship is finding Soviet relationships with the environment to be distinctive but not aberrant, grimly consistent with global trends rather than singularly destructive.”<sup>45</sup>

Finally, we note that our book brings together voices from a multiplicity of different traditions, thereby literally embodying the international principle that characterizes our method. Our authors hail from St. Petersburg and Genoa; Washington, DC and New York City; Maine; Tiumen’; Surgut; Zapozhzhia; Moscow and London; Göttingen and Dublin; Ekaterinburg and Munich; Birmingham, UK; and Kirkenes at the northern tip of Scandinavia. While this sort of international collaboration and intensive travel have (we hope temporarily) faded into the past, we hope that our book may serve as a testament to the benefits of such cooperative adventures. We have sought to preserve individual voices while at the same time joining in a common task.

**Catherine Evtuhov** is professor of history at Columbia University in the City of New York.

**Julia Lajus** is visiting associate professor in the History Department, the Hariman Institute, and the Climate School at Columbia University. She was formerly associate professor and senior researcher at the Department of History and head of the Laboratory for Environmental and Technological History, National Research University Higher School of Economics, St. Petersburg.

David Moon is honorary professor in the School of Slavonic and East European Studies, University College London.

## Notes

1. The opening paragraph of the introduction is written by Catherine Evtuhov; otherwise the introduction is co-authored.
2. Czeslaw Milosz, "Facing Too Large an Expanse," in *Visions from San Francisco Bay* (New York, 1982), 10.
3. Andy Bruno, *The Nature of Soviet Power: An Arctic Environmental History* (Cambridge, 2016).
4. For examples of comparative works drawing on specialist expertise on the region under investigation, see Paul Josephson, *Industrialized Nature: Brute Force Technology and the Transformation of the Natural World* (Washington, DC, 2002); J. R. McNeill and Corinna R. Unger, eds., *Environmental Histories of the Cold War* (Cambridge, 2010); Astrid Kirchoff and J. R. McNeill, *Nature and the Iron Curtain: Environmental Policy and Social Movements in the Communist and Capitalist Countries, 1945–1990* (Pittsburgh, 2019).
5. See for instance, the quite original narrative on the relation of climate to power in "Russian America" by Ryan Tucker Jones, "'A Cruel Climate Without any Art': European Natural History and the Northern Nature of the Other Pacific, 1740–1840," in *Northscapes: History, Technology, and the Making of Northern Environments*, ed. Dolly Jørgensen and Sverker Sörlin (Vancouver, 2013), 17–38.
6. David Moon, "Land and Environment," in *The Oxford Handbook of Modern Russian History*, ed. Simon Dixon (Oxford, 2015 [online]), DOI: 10.1093/oxfordhb/9780199236701.013.001. For modern examples of environmental determinist interpretations of Russian history, see Richard Pipes, *Russia under the Old Regime* (London, 1974); L. V. Milov, *Velikorusskii pakhar' i osobennosti rossiiskogo istoricheskogo protsessa* (Moscow, 1998); A. P. Parshev, *Pochemu Rossiia ne Amerika: Kniga dlia tekhn, kto ostaetsia zdes'* (Moscow, 2000).
7. Valerie A. Kivelson, *Cartographies of Tsardom: The Land and Its Meanings in Seventeenth-Century Russia* (Ithaca, NY, 2006); Denis J. B. Shaw, "Mapmaking, Science and State Building in Russia before Peter the Great," *Journal of Historical Geography* 31, no. 3 (2005): 409–29.
8. Ryan Jones, *Empire of Extinction: Russians and the North Pacific's Strange Beasts of the Sea, 1741–1867* (Oxford, 2014). See also Catherine Evtuhov, "A 'Complete' Atlas of the Russian Empire," in *Picturing Russian Empire*, ed. Valerie Kivelson and Joan Neuberger (Oxford, forthcoming 2023).
9. See C. Evtuhov, "Philosophy and Environment," unpublished conference paper.
10. See IUSS Working Group WRB, *World Reference Base for Soil Resources 2014*, Update 2015, World Soil Resources Reports 106, FAO, Rome 2015, <https://www.fao.org/3/i3794en/I3794en.pdf>
11. For Dokuchaev and international soil science, see Jan Arend, *Rußlands Bodenkunde in der Welt. Eine ost-westliche Transfergeschichte, 1880–1945* (Göttingen, 2017). For

- more on the Great Plains and steppes, see David Moon, *The American Steppes: The Unexpected Russian Roots of Great Plains Agriculture, 1870s-1930s* (New York, 2020).
12. A. I. Voeikov, *Snezhnyi pokrov, ego vliianie na pochvu, klimat i pogodu i sposoby issledovaniia* (St. Petersburg, 1889).
  13. Michael Gordin, *A Well-Ordered Thing: Dmitrii Mendeleev and the Shadow of the Periodic Table* (Princeton, 2019). See also Catherine Evtuhov, “The Roots of Dokuchaev’s Scientific Contributions: Cadastral Soil Mapping and Agro-Environmental Issues,” in *Footprints in the Soil: People and Ideas in Soil History*, ed. Benno Warkentin (Amsterdam, 2006).
  14. For more on these “environmental” scientists and others, see Jonathan Oldfield and Denis J. B. Shaw, *The Development of Russian Environmental Thought: Scientific and Geographical Perspectives on the Natural Environment* (London, 2016).
  15. Daniil Aleksandrov, Franz-Iozef Briuggemaier [Franz-Josef Brügge-meier] and Iuliia Laius [Julia Lajus], eds., *Chelovek i priroda: ekologicheskaiia istoriia* (St. Petersburg, 2008).
  16. J. R. McNeill, “Observations on the Nature and Culture of Environmental History,” *History and Theory* 42, no. 4 (2003): 30.
  17. Julia Lajus, “Russian Environmental History: A Historiographical Review,” in *The Great Convergence: Environmental Histories of BRICS*, ed. S. Ravi Rajan and Lise Sedrez (Delhi, 2018), 245–73; Andy Bruno, “Russian Environmental History: Directions and Potentials,” *Kritika: Explorations in Russian and Eurasian History* 8, no. 3 (2007): 635–50.
  18. Pey-Yi Chu, *The Life of Permafrost: A History of Frozen Earth in Russian and Soviet Science* (Toronto, 2020); Anthony J. Amato, *The Carpathians, the Hutsuls, and Ukraine: An Environmental History* (Lanham, MD, 2021); Alan D. Roe, *Into Russian Nature: Tourism, Environmental Protection, and National Parks in the Twentieth Century* (New York, 2020).
  19. Christopher Ely, “Review Essay,” *Slavic Review* 81, no. 1 (Spring 2022): 187–94. Ely is the author of *This Meager Nature: Landscape and National Identity in Imperial Russia* (DeKalb, 2003), 187.
  20. Ely, “Review Essay,” 189. The book in question is David Moon, Nicholas Breyfogle, and Alexandra Bekasova, eds., *Place and Nature: Essays in Russian Environmental History* (Winwick, 2021).
  21. Anastasia Fedotova and Elena Korchmina, “Cattle Pasturing as a Traditional Form of Forest Use and Conflicts between Peasants and Forestry Administration in the Long Nineteenth Century (the Case of Białowieża Primeval Forest),” in “Reconfiguring Nature: Resource Security and the Limits of Expert Knowledge,” ed. Christian Kert and John Martin, special issue, *Global Environment* 13, no. 2 (2020): 525–54; Marina Loskutova, “Quantifying Scarcity: Deforestation in the Upper Volga Region and Early Debates over Climate Change in Nineteenth-Century Russia,” in “Resource Challenges and Constructions of Scarcity in the 19th and 20th Centuries,” ed. Ole Sparenberg and Matthias Heymann, special issue, *European Review of History: Revue europeenne d’histoire* 27, no. 3 (2020): 253–72. See also Nicolas Maughan, Alexei Kraikovski and Julia Lajus, “Introduction” to “Living Side by Side: The Water Environment, Technological Control and Urban Culture in Russian and Western History,” *Water History* 10, nos. 2–3 (2018): 133–40, and several papers in this issue.



22. See Elena Kochetkova, “Ekologicheskaiia kontroversa: Sovetskie inzheneriy i biologicheskii metod ochildki promyshlennykh vod, 1950–60-e gg.,” in “The Green End to the Red Empire,” special issue, *Ab Imperio* 1 (2019): 153–80; and Andy Bruno, ed., “Studies of the Siberian Anthropocene,” special issue, *The Soviet and Post-Soviet Review* 48, no. 3 (2021); 49, no. 1 (2022).
23. “Sovetskoe znanie ob okružhaischei srede,” special issue, *Ural’skii istoricheskii vestnik* 2, no. 75 (2022): 59–114; Anna Agafonova, “Sanitarnye popechitel’stva v dorevoliutsionnoi Rossii,” in “Epidemii i golod v istorii Rossii,” special issue, *Ural’skii istoricheskii vestnik* 1, no. 70 (2021): 30–38; as well as several special issues of *Vestnik Surgut’skogo gosudarstvennogo pedagogicheskogo universiteta* on the history of water (2021, no. 6 [75]), environmental aspects of agrarian history, urban history and history of industry (2018, no. 6 [57]), (2019, no. 1 [58]); and the environmental history of Russian regions (2017, no. 6 [51]).
24. See Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (Oxford, 2012); Bathsheba Demuth, *Floating Coast: An Environmental History of the Bering Strait* (New York, 2019); Josephson, *Industrialized Nature*; Moon, *American Steppes*; Jenny Leigh Smith, *Works in Progress: Plans and Realities on Soviet Farms, 1930–1963* (New Haven, CT, 2014).
25. For works illustrating this broadening geographical range, see, for example, Nicholas Breyfogle, ed., *Eurasian Environments: Nature and Ecology in Imperial Russian and Soviet History* (Pittsburgh, 2018); David Moon, *The Plough That Broke the Steppes: Agriculture and Environment on Russia’s Grasslands, 1700–1914* (Oxford, 2013); Sarah Cameron, *The Hungry Steppe: Famine, Violence, and the Making of Soviet Kazakhstan* (Ithaca, NY, 2018); Maya K. Peterson, *Pipe Dreams: Water and Empire in Central Asia’s Aral Sea Basin* (New York, 2019); Jennifer Keating, *On Arid Ground: Political Ecologies of Empire in Russian Central Asia* (Oxford, 2022); Amato, *Carpathians*; Doubravka Olšáková, ed., *In the Name of the Great Work. Stalin’s Plan for the Transformation of Nature and Its Impact in Eastern Europe* (New York, 2016).
26. H. J. Mackinder, “The Geographical Pivot of History,” *Geographical Journal* 23, no. 4 (April 1904): 421–37. See also David Christian, “Inner Eurasia as a Unit of World History,” *Journal of World History* 5, no. 2 (1994): 173–211.
27. For a fuller discussion of these issues, see David Moon, “The Curious Case of the Marginalization or Distortion of Russian and Soviet Environmental History in Global Environmental Histories,” *International Review of Environmental History* 3, no. 2 (2017): 31–50. For a recent example of work on global environmental history by an Anglophone scholar that gives more attention to other parts of the world and uses examples from the Russian and Soviet states, based on mostly older works in English, mainly as negative examples, see Daniel R. Headrick, *A Global Environmental History: Humans versus Nature* (New York, 2020), 296–300, 446–48.
28. Sophie Pinkham, “Blood on the Ice,” *New York Review of Books*, 7 November 2019.
29. Peterson, *Pipe Dreams*.
30. Sverker Sörlin and Paul Warde, eds., *Nature’s End: History and the Environment* (Basingstoke, 2009); Sverker Sörlin and Nina Wormbs, “Environing Technologies: A Theory of Making Environment,” *History and Technology* 34, no. 2 (2018): 101–25.
31. Alexei Kraikovski and Julia Lajus, “‘The Space of Blue and Gold’: The Nature and Environment of Solovki in History and Heritage,” in Moon et al., *Place and Nature*, 37–68.

32. Jonathan Oldfield, Julia Lajus, and Denis J. B. Shaw, "Conceptualizing and Utilizing the Natural Environment: Critical Reflections from Imperial and Soviet Russia," *Slavonic and East European Review* 93, no. 1 (January 2015): 1–15.
33. Chu, *Life of Permafrost*, 20–21.
34. J. R. McNeill, "Introductory Remarks: The Anthropocene and the Eighteenth Century," *Eighteenth-Century Studies* 49, no. 2 (Winter 2016): 117–28, esp. p. 121; Christopher Bayly, *The Birth of the Modern World, 1780–1914: Global Connections and Comparisons* (Malden, MA, 2003); Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London, 2016).
35. This sort of approach to society was pioneered by Reginald Zelnik, *Law & Disorder on the Narova River: The Kreenholm Strike of 1872* (Berkeley, 1995); and independently in Russia by Alsu Biktasheva, *Kazanskie gubernatory v dialogakh vlastei: pervaiia polovina XIX veka* (Kazan, 2008).
36. Nicholas Breyfogle, "Towards an Environmental History of Tsarist Russia and the Soviet Union," in *Eurasian Environments*, 17.
37. Alfred Rieber, "Imperial Space," in *The Struggle for the Eurasian Borderlands: From the Rise of Early Modern Empires to the End of the First World War* (Cambridge, 2014); Mark Bassin, "Geographies of Imperial Identity," in *The Cambridge History of Russia*, ed. Dominic Lieven (Cambridge, 2006).
38. Bruno, *Nature of Soviet Power*.
39. Douglas R. Weiner, "A Death-Defying Attempt to Articulate a Coherent Definition of Environmental History," *Environmental History* 10, no. 3 (July 2005): 404–20; 409.
40. Sörlin and Warde, *Nature's End*.
41. The European Society for Environmental History (ESEH) and American Society for Environmental History (ASEH).
42. The British Association for Slavonic and East European Studies (BASEES) and the Association for Slavic, East European and Eurasian Studies (ASEEES).
43. For example: Jonathan Oldfield, Julia Lajus, and Denis J. B. Shaw, eds., "Conceptualizing and Utilizing the Natural Environment"; Evtukhova et al., "Prirodnye resursy, landshafty i klimat"; Devid Mun, "Rossiiskaia i sovetskaia ekologicheskaia istoriia v sovremennoi zapadnoi nauke," in *Rossiiskaia provintsiia kak sotsiokul'turnoe pole formirovaniia grazhdanskoi i natsional'noi identichnosti: sbornik nauchnykh statei; Materialy VIII Mezhdunarodnykh Stakheevskikh chtenii*, ed. I. V. Maslova et al. (Elabuga, 2017): 14–21. <http://environmentalhistory.ru/moon>.
44. Moon et al., *Place and Nature*.
45. Chu, *Life of Permafrost*, 19.

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