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Nature and Power in the Soviet North

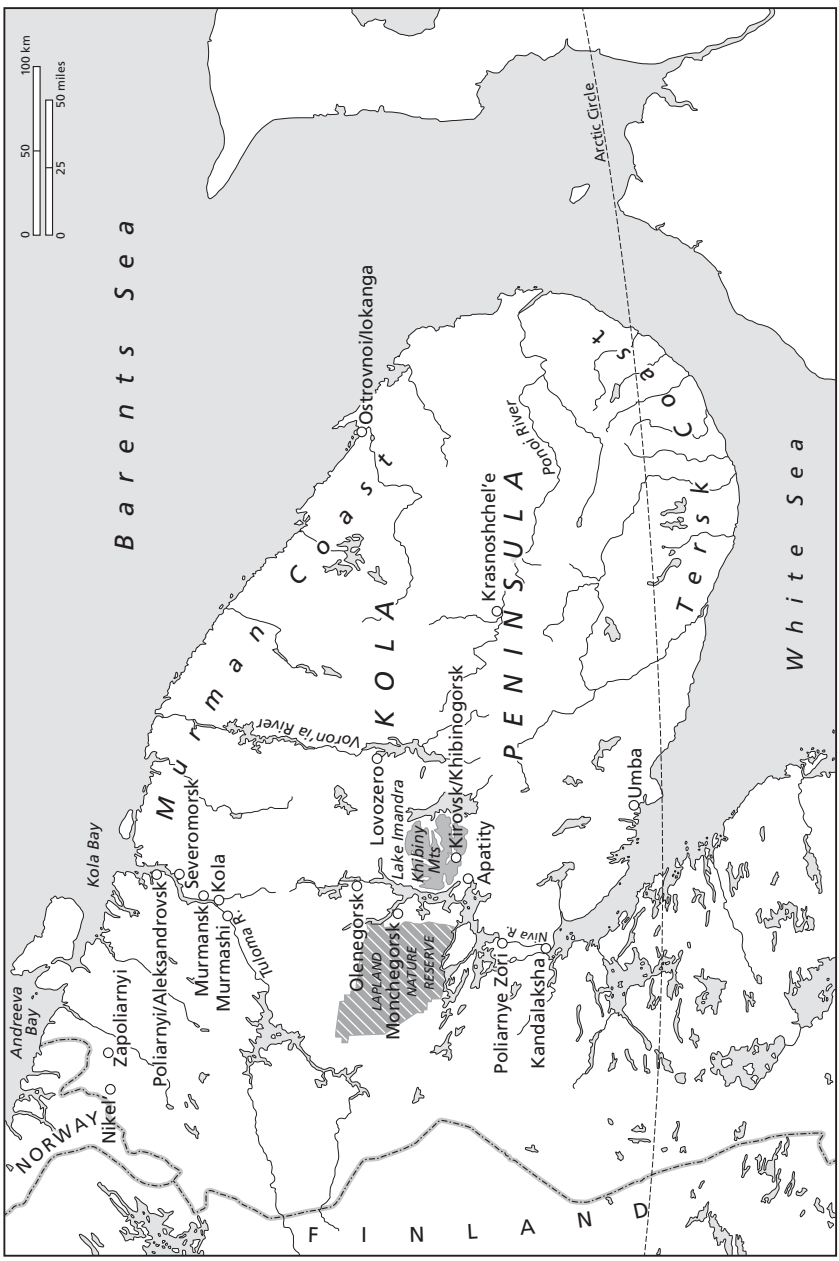
Northern nature inspired many individuals like Aleksandr Platonovich Engel′gardt. In 1893 Tsar Alexander III promoted this active state official to the post of governor of the Arkhangel′sk province – an enormous territory in the north of Russia that at the time extended from the Ural Mountains in the east to Finland in the west. Soon after the appointment Engel′gardt took a trip to inspect the vast lands now under his tutelage, devoting particular attention to the natural conditions of a special section of his dominion in the far northwestern corner of the country. He saw plenty of economic potential in this region, which, along with the rest of the Russian north, existed "in complete stagnation."[1] Upon his arrival, Engel′gardt intimated that the sparse and forbidding landscape possessed the seeds of its own renovation: "In general a sort of majestic tranquility comes forth, such that it seems that in these shores are hidden forces, only temporarily seized by a deep sleep. But in the mirage of this ancient silence and tranquility, the mind of the traveler already discerns a locomotive rushing here that will awaken the dormant forces all around and enliven this silently sullen and presently unpopulated place."[2] The rush of a locomotive certainly came during the next century as the world's first communist country expanded economic activity in this part of the Arctic to a greater extent than even imaginable to Engel′gardt.

[1] A. P. Engel′gardt, *Russkii sever″: putevyia zapiski* (Saint Petersburg: Izdanie A. S. Suvorina, 1897), 1. An English translation of this book was also published. A. P. Engel′gardt, *A Russian Province in the North*, trans. Henry Cooke (Westminster: Archibald Constable and Company, 1899).
[2] Engel′gardt, *Russkii sever″*, 57.

The northern territory that elicited Engel′gardt's premonition was the Kola Peninsula. With a mix of taiga and tundra ecosystems, the region rests almost entirely north of the Arctic Circle, except for a small portion of its southern Tersk coast. In the interior several small mountain ranges tower over the lowlands, including the Khibiny Mountains and the massifs of Lovozero and Monche. Many fresh water lakes, including the sizable Lake Imandra, dot the landscape and numerous rivers such as the Niva, Tuloma, Ponoi, Iokanga, and Varzuga cross it. Coniferous forests that thin out with altitude and latitude and swamps that rest on poorly draining soils cover much of the terrain. With a polar location the region endures long periods of darkness during the snowy winters and enjoys weeks of perennial light in the brief, but vivacious, summers. Some patches of permafrost exist in the coldest upland areas. Nevertheless, the Gulf Stream current bathes the northern shores of the Kola Peninsula (the Murman coast) with warm waters, generally moderating the climate and leaving many steep rocky inlets with unfrozen bays year-round. While the territory contains less total biomass than most temperate or tropical zones, a wide array of mammals, migratory birds, fish, insects, lichen, coniferous trees, shrubs, and other plants make it their home.

At the dawn of the twentieth century fewer than 10,000 people lived on the Kola Peninsula. They were an increasingly ethnically diverse bunch of Russians, Pomors, Sami, Finns, Norwegians, Komi, and Nenets, who mostly resided in coastal settlements. With limited potential for agricultural cultivation in this environment, fishing and hunting provided the primary means of subsistence for most of the population. Slavic Pomors had temporarily traveled to the Murman coast for summer fishing in the Barents Sea since the Middle Ages. Within the interior of the peninsula, the indigenous Sami lived in highly dispersed settlements and practiced semi-nomadic lifestyles suitable for hunting and herding reindeer. Official state colonization efforts since the 1860s had brought in some new permanent residents, as had the establishment of a new commercial port called Aleksandrovsk in the 1890s and the recent migration of Komi and Nenets reindeer pastoralists. However, at the time the territory remained without any sizable cities, major military installations, or large industrial enterprises.

Less than a hundred years later, the Kola Peninsula had become a very different place. The largely coterminous Murmansk region, which took up some 144,900 square kilometers in area, now administered it. Soviet campaigns to develop the Kola north metamorphosed its natural environment and swelled its human population. Numerous dense cities, industrial enterprises, and military facilities filled the central corridor



MAP 1. The Kola Peninsula.

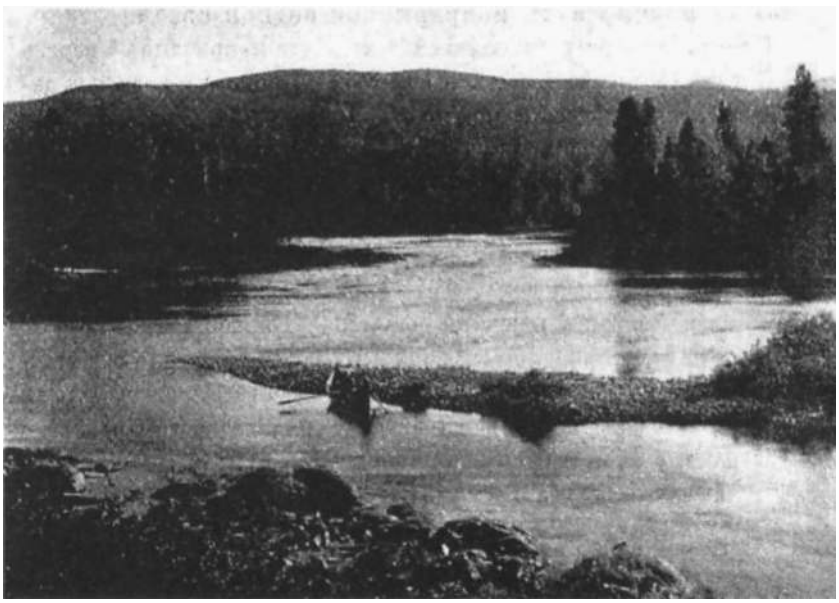


FIGURE 1. The Kola Peninsula During Aleksandr Engel′gardt's Trip at the End of the Nineteenth Century.
Source: A. P. Engel′gardt, *Russkii sever″: putevyia zapiski* (Saint Petersburg: Izdanie A. S. Suvorina, 1897), 77.

along Lake Imandra from Kandalaksha on the White Sea to Severomorsk and Murmansk in the Kola Bay. Over a million people made the Murmansk region their home at the beginning of the 1990s. Many had moved there for career opportunities, but others initially arrived as the result of forced relocations. Proportionally, the Sami dwindled to a small minority of the population, while Russians made up an overwhelming majority. By the late Soviet period, huge gashes extended deep into the mined mountains. Some of the forests felled in the first half of the century had begun to recover, but elsewhere a mixture of acid rain and metal emissions denuded enormous zones of vegetation. The tainted chemistry of soils, air, and water killed off aquatic species and threatened human health. Reindeer, which once roamed throughout the territory, were now confined to specified and separate areas for herding and conservation. The impulse to find energy in a place without large supplies of fossil fuels led to the damming and regulation of rivers and lakes and the proliferation of radioactive wastes from a nuclear power plant, atomic submarines, and icebreakers. Overall, Soviet rule had turned the Kola Peninsula into the most populated, industrialized, and militarized section of the global Arctic, as well as one of the most polluted.

FIGURE 2. Murmansk in the Early Twenty-First Century.
Source: Author's photograph.

Why did this distant outpost of the Russian empire become one of the most economically developed and environmentally damaged territories of the north in the twentieth century? What drove the Soviets to build up this piece of the Arctic so extensively? Was Engel′gardt onto something when he wrote that "hidden forces" in the environment could help bring the region to life? How, indeed, did Kola nature affect the Soviet industrial efforts that in turn changed Kola nature? Which ideas about transforming the natural world and practices for doing so did communist leaders borrow from others and which ones did they invent themselves? How can the Soviet experience in the polar north be compared to what occurred elsewhere in the Arctic and what took place in modernizing countries more broadly? Perhaps most importantly, what can be learned about power in the Soviet system as a whole by viewing it through an environmental lens? These questions animate the pages that follow.

Nature as Actor

The Nature of Soviet Power tells the history of economically driven environmental change on the Kola Peninsula. It covers the entire Soviet period (1917–1991), beginning with late imperial Russia and extending into the post-Soviet era. In order to observe varied forms of environmental interaction, I investigate five different industries that burgeoned in the twentieth century: railroad construction, the mining and processing of chemical fertilizers, reindeer husbandry, nickel and copper smelting, and the energy sector. Many characters populate this story: reformist bureaucrats who came of age in tsarist Russia; scientists seeking to benefit the state; upwardly mobile communists who found themselves in perilous positions of authority during the Stalinist terror; regional and central state authorities; coerced laborers who built and worked in an array of industries; different ethnic groups that depended on hunting and herding reindeer; a variety of technical experts who concerned themselves with everything from improving the extraction of mineral ore to limiting the effects of pollution; and elements of the natural environment itself, including animals, rocks, and snow. Taking an all-encompassing approach to environmental history, I examine cultural perceptions of nature, plans for development, lived experiences in an Arctic environment, and modifications to the physical world.

The transformation of this far northern region suggests, above all, that environmental relations fundamentally shaped the Soviet experience. In this book I argue that interactions with the natural world both enabled

industrial livelihoods and curtailed socialist promises. Nature itself was a participant in the communist project. Physical, geographical, and ecological features of the Kola north offered opportunities for, accommodated meddling by, and posed resistance to Soviet industrializers. The unfrozen waters of the Kola Bay, the strategic and comparatively accessible location of the peninsula within Russia itself, the geological composition of the earth there, and the region's hydrological properties fostered the rise of certain industrial sectors and naval facilities. At the same time, the darkness of the polar night, the sharp relief of mountain ranges, the behavior of animals, and even the chemical properties of excavated minerals interfered with state schemes and redirected their outcomes in crucial ways.

By revealing the essential role of the natural environment in northern economic development, this study opens a new perspective on Soviet power. Earlier generations of historians saw political power in the USSR in disparate ways. Some classified the Soviet Union as a totalitarian state, others emphasized how the social support underlying Stalinism and the chaos that imbued the communist project laid bare crucial limitations on dictatorial control, and a third group provided a synthesis of these two schools that investigated the imperfect interaction of totalistic ideologies and everyday practices.[3] None of these totalitarian, revisionist, and post-revisionist approaches paid much attention to how the environment influenced what the Soviets accomplished. More recent historians stress the importance of communist culture and ideology for mobilizing Soviet citizens, highlight the impact of international trends and interactions on Soviet trajectories, or bring spatial discourses and practices into assessments of political power.[4] I join these scholars in exploring the

[3] The first group notably includes Carl Friedrich and Zbigniew Brzezinski, *Totalitarian Dictatorship and Autocracy*, 2nd edn. (New York: Praeger Publishers, 1966) and Alex Inkeles and Raymond Bauer, *The Soviet Citizen: Daily Life in a Totalitarian Society* (Cambridge, MA: Harvard University Press, 1959). A couple of important works of the second, revisionist, set of scholars are Sheila Fitzpatrick, *Education and Social Mobility in the Soviet Union, 1921–1934* (Cambridge: Cambridge University Press, 1979) and Moshe Lewin, *The Making of the Soviet System: Essays in the Social History of Interwar Russia* (London: Methuen, 1985). Self-consciously post-revisionist works include Stephen Kotkin, *Magnetic Mountain: Stalinism as a Civilization* (Berkeley: University of California Press, 1995) and Jochen Hellbeck, *Revolution on My Mind: Writing a Diary under Stalin* (Cambridge, MA: Harvard University Press, 2006).

[4] Renewed stress on communist ideology appears in Igal Halfin, *From Darkness to Light: Class, Consciousness, and Salvation in Revolutionary Russia* (Pittsburgh: University of Pittsburgh Press, 2000); David Priestland, *Stalinism and the Politics of Mobilization: Ideas, Power, and Terror in Inter-war Russia* (Oxford: Oxford University Press, 2007); David Brandenberger, *Propaganda State in Crisis: Soviet Ideology, Indoctrination, and*

ideological, international, and spatial dimensions of power, but also redirect the discussion toward materialist concerns.

This monograph is the first to fully consider alive and inert elements of the natural world as participants in the dramas of Soviet history. Animate and inanimate materials were not just passively acted upon as objects, but also played a role as subjects in this story. I build upon the work of a wide range of theorists who provide examples of how insects, bacteria, organic and inorganic wastes, rivers, precipitation, and animals intrude into histories that have often been interpreted in more classically humanist terms. Such thinkers seek to capture the interactive mix between the natural and non-natural and reveal the potency of neglected materials.[5] For instance, Paul Robbins illustrates the varied ways that the chemical and biological needs of turf grass have manipulated lawn owners' behavior,

Terror under Stalin, 1927–1941 (New Haven: Yale University Press, 2011); and Jan Plamper, *The Stalin Cult: A Study in the Alchemy of Power* (New Haven: Yale University Press, 2012). For the recent attention to international connections in Soviet history, see Katerina Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931–1941* (Cambridge, MA: Harvard University Press, 2011); David L. Hoffmann, *Cultivating the Masses: Modern State Practices and Soviet Socialism, 1914–1939* (Ithaca: Cornell University Press, 2011); and Michael David-Fox, *Showcasing the Great Experiment: Cultural Diplomacy and Western Visitors to the Soviet Union, 1921–1941* (Oxford: Oxford University Press, 2012). The spatial turn in Soviet historiography is reflected in Kate Brown, *A Biography of No Place: From Ethnic Borderland to Soviet Heartland* (Cambridge, MA: Harvard University Press, 2005); Nick Baron, *Soviet Karelia: Politics, Planning and Terror in Stalin's Russia, 1920–1939* (London: Routledge, 2007); Nick Baron, "New Spatial Histories of 20th-Century Russia and the Soviet Union: Exploring the Terrain," *Kritika* 9, no. 2 (Spring 2008): 433–447; Mark Bassin, Christopher Ely, and Melissa K. Stockdale, eds., *Space, Place, and Power in Modern Russia: Essays in the New Spatial History* (DeKalb: Northern Illinois University Press, 2010); and Heather D. DeHaan, *Stalinist City Planning: Professionals, Performance, and Power* (Toronto: University of Toronto Press, 2013). For an analysis of the Kola Peninsula from the perspective of spatial history, see Pavel V. Fedorov, "The European Far North of Russia and Its Territorial Constructions in the Sixteenth – Twenty-First Centuries," *Acta Borealia: A Nordic Journal of Circumpolar Studies* 28, no. 2 (2011): 167–182.

5 Tim Ingold, *The Perception of the Environment: Essays in Livelihood, Dwelling, and Skill* (London: Routledge, 2000); Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002); Kristin Asdal, "The Problematic Nature of Nature: The Post-Constructivist Challenge to Environmental History," *History and Theory* 42, no. 4 (December 2003): 60–74; Zsuzsa Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary* (Bloomington: Indiana University Press, 2007); Sverker Sörlin and Paul Warde, "The Problem of the Problem of Environmental History: A Re-reading of the Field," *EH* 12, no. 1 (January 2007): 107–130; Daniel Schneider, *Hybrid Nature: Sewage Treatment and the Contradictions of the Industrial Ecosystem* (Cambridge, MA: The MIT Press, 2011); and Richard Peet, Paul Robbins, and Michael J. Watts, eds., *Global Political Ecology* (London: Routledge, 2011).

while Jane Bennett highlights the vitality of metals, fish oils, electricity, and foods as vibrant matter that contributes to contemporary politics.[6] Scholars of state-socialist countries, however, have been slow to move from taking "nature as proxy" to investigating "nature as actor," as sociologist Zsuzsa Gille has encouraged them to do.[7] Beyond analyzing the physical and biological features of the Kola landscape as simply victims, impediments, valuable objects, or stand-ins for other questions, I show here how they responded to state manipulation in sometimes surprising and unanticipated ways, thereby shaping the Soviet system itself.

To do this, I treat Soviet power as part of an assemblage. In Bruno Latour's rendering, an assemblage includes an eclectic grouping of ostensibly social and natural actors into transitory, but potent, collectivities.[8] Out of necessity, central and regional communist leaders shared power not only with a complex array of different bureaucratic interests, classes, ethnicities, religions, and genders, but with non-humans and the non-living as well. Mountains, lichens, lakes, and salmon belonged to amalgams of influential actors that emerged during campaigns to industrialize the Kola Peninsula. Power in this sense is somewhat broader than the ability to enact one's will so as to achieve a desired result, since lakes and lichen possess no knowable intentions. An important distinction exists between agents, which may have willful intentions, and actors, which do not always but can still shape events unexpectedly.[9] Pegmatite rocks, unlike people, do not have desires, but, as I will show, they lured exploration geologists to the north. Non-human actors helped direct change even if they did not have human agency.

Seen as belonging to an interactive assemblage, Soviet power was both strikingly robust and rooted in inescapable materialities. The natural

[6] Paul Robbins, *Lawn People: How Grasses, Weeds, and Chemicals Make Us Who We Are* (Philadelphia: Temple University Press, 2007) and Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010).

[7] Zsuzsa Gille, "From Nature as Proxy to Nature as Actor," *SR* 68, no. 1 (Spring 2009): 1–9. Two recent articles on Russian and Soviet history have brought in material actors, see Diana Mincyte, "Everyday Environmentalism: The Practice, Politics, and Nature of Subsidiary Farming in Stalin's Lithuania," *SR* 68, no. 1 (Spring 2009): 31–49 and Julia Fein, "Talking Rocks in the Irkutsk Museum: Networks of Science in Late Imperial Siberia," *The Russian Review* 72, no. 3 (July 2013): 409–426.

[8] Among Latour's many works, one might best start with Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005).

[9] The language I use throughout this work attempts to reflect this difference. When I discuss elements of the natural environment "interfering with" or "inspiring" developmental programs, I imply a form of participation that involves action, but not agency.

world contributed to the regime's mobilization of resources for industrial and military projects, but also placed limits on the extension of the state authority. On the one hand, the ability of the Soviet Union to utilize northern nature for economic ends was profound and unprecedented. The country turned a frigid land at the end of the earth into a concentrated zone of industrial activity – a feat that required greater state power than existed almost anywhere before the twentieth century. Minerals and metals for mining, forests and peat for burning, and rivers for regulating allowed the Soviets to build up this region. In the view of one prominent Kola industrialist, Vasilii Kondrikov, "only under Soviet power, only under the leadership of the Communist Party, and only with socialist methods of labor, shock-work, and socialist competitions will it be possible to transform the desolate tundra of the north into an industrial and cultural territory."[10] Though at the time other countries certainly might have been able to industrialize the Arctic similarly, Kondrikov rightly foresaw that only the Soviet Union would actually undertake such an extensive endeavor.

On the other hand, the government did not eclipse nature's influence. Instead, the Soviet Union remained dependent on the material world and subject to its unpredicted intrusions. In one instance, Kola reindeer – with their migratory instincts and their tendency to evade rigid boundaries of domesticity and wildness – complicated Soviet programs for conservation and agriculture. Early Soviet designs to make nomads sedentary ended up accommodating seasonal reindeer migrations as an occupational necessity. The sustained willingness of wild and domestic animals to mix with each other also challenged both the restoration efforts of the Lapland Nature Reserve and the economic viability of socialist reindeer herding. In another case, the mineral nepheline, which could be used as a source for aluminum production, interfered with a campaign to reuse mining wastes. In the 1930s geochemist Aleksandr Fersman predicted that such schemes for the "complex utilization of natural resources" could entirely eliminate industrial pollution. Yet, in contrast to this hope, unused nepheline wastes accumulated and considerably degraded the surrounding environment over the proceeding decades.[11] The chasm between this conservationist

[10] V. I. Kondrikov, "Tri goda v Khibinakh," in A. E. Fersman, ed., *Khibinskie Apatity i nefeliny: Nefelinovoi spornik*, vol. 4 (Leningrad: Goskhimtekhizdat Leningradskoe otdelenie, 1932), 7.

[11] A. E. Fersman, *Kompleksnoe ispol'zovanie iskopaemogo syr'ia* (Leningrad: Izdatel'stvo Akademii Nauk SSSR, 1932) and Olga Rigina, "Environmental Impact Assessment of the Mining and Concentration Activities in the Kola Peninsula, Russia by Multidate Remote Sensing," *Environmental Monitoring and Assessment* 75, no. 1 (April 2002):