

The Environmental State: Nature and the Politics of Environmental Protection

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Abstract

Basic oppositions between economic growth and environmental protection are well understood by sociologists, but the state's role in environmental protection and regulation is underspecified in sociological theory. We define the environmental state and theorize two structuring forces central to its provision of environmental welfare. First, culturally distinctive constructions of nature shape environmental politics and statecraft. State actions linked to charismatic “special” nature often win broad political support, whereas actions linked to less resonant “ordinary” nature do not. Second, historical legacies of developmentalism shape environmental coalitions. Arms of the environmental state that combine extractive pasts with newer regulatory responsibilities are better able to build broad support, whereas narrowly regulatory or developmental arms struggle to do so. We illustrate the relevance of each process for the politics of environmental regulation and of technoscientific expertise. Both processes help explain the varied efficacy of environmental states and set the stage for their comparative study.

Keywords

environmental politics, nation-states, environmental protection, governance, nature

Critical ecological problems such as climate change (Dunlap and Brulle 2015; Hoegh-Guldberg et al. 2018), mass extinction (Ceballos, Ehrlich, and Raven 2020), and persistent and unjust toxic exposures (Pellow 2017) do not respect national boundaries, but nation-states remain the epicenter of environmental governance. States are the primary organizational means of implementing environmental protections, from subnational laws (Vogel 2018) to international agreements (Falkner 2016). They are principal sources of moral authority, translating culturally imbued and politically contested schemes of ecological valuation into the laws and regulations that structure society-environment relations (Elliott 2021;

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Fourcade 2011). And states provide the institutional infrastructure that organizes the field of environmental politics, shaping how all organizations and individuals comply with but also contest and remake the rules and practices that govern human relationships with nature (Dryzek et al. 2003; Mildenerberger 2020; Scoville 2022).

Recognizing the centrality of states to environmental questions, scholars of environmental politics and environmental problems, such as climate change (Jorgenson et al. 2023) and environmental justice (Harrison 2019), have begun to integrate environmental-sociological theories of society-environment relations and political-sociological theories of the state. This article embraces these efforts and pushes them forward by offering a new theorization of the environmental state. We reference many different national states and historical contexts, but our primary focus is on the environmental politics endogenous to the United States. Recognizing the specificity of this case, our broader aim is nonetheless to lay conceptual foundations for a sociology of environmental states within contemporary capitalist democracies, one that accentuates and makes sense of their common features and dynamics; offers a starting point for historical-causal explanations of their development, effectiveness, and failures; and delivers conceptual guideposts to encourage future theoretical refinement and empirical study of environmental states around the world.

Our argument is anchored by two foundational macro-historical claims: Historically and culturally distinctive constructions of nature, on one hand, and distinctive legacies of natural resource management and extraction, on the other, mutually condition environmental state structure and shape its policy, condition the rise of extra-state coalitions that deliver support and resistance, and help institutionalize the ways environmental states value nature. As structuring processes, cultural constructions of nature and the environmental state's own developmental history act recursively, organizing the politics that act back on agencies and ministries over time. This, in turn, helps explain the modern environmental state's internal heterogeneity and diverse policy trajectories, including contradictions and conflicts that can emerge when incongruous institutions, values, and political-ecological commitments intersect.

The argument has six main parts. The first part defines the environmental state and delineates scope conditions and analytic presuppositions. Part two situates the environmental state within environmental and political-sociological theory. Parts three and four unpack the article's central theoretical claims about the macro-historical shaping of environmental states through entwined social constructions of nature and political-ecological legacies of state development. Parts five and six describe how these macro-historical processes in turn shape the meso-level politics of environmental regulation and technoscientific expertise. The conclusion summarizes the framework's main contributions and identifies areas for future sociological research on environmental states and their politics.

WHAT IS THE ENVIRONMENTAL STATE, AND WHAT DOES IT DO?

An Empirically Tractable Definition

As we use the term, the environmental state encompasses all governmental organizations and institutions that aim to reorganize production, consumption, and other forms of human activity in ways that try to minimize long-term ecological degradation and that attempt to uphold environmental rights, understood broadly as entitlements to a life-supporting natural environment for present and future generations.¹ The policy focus of environmental states, in other words, is on the provision of environmental welfare, defined as the set of biophysical and social conditions required to support life and livelihoods into the imagined future.

Like welfare states, environmental states are imperfect and evolving historical crystallizations of *attempts* to achieve the aims just described, not utopian realizations of “truly”

sustainable forms of state-led governance (see Eckersley 2004; Fisher and Freudenburg 2004; Frickel and Davidson 2004; Hausknost and Hammond 2020). Freed from the premise that environmental states must be “fully” environmental to be labeled as such, they can be operationalized relatively simply: On a practical level, the environmental state is constituted by the wide variety of (deeply imperfect) governmental organizations and institutions that attempt to provide environmental welfare, always in tension with a wide array of other state prerogatives. This includes agencies and ministries that limit and regulate toxic pollution and hazardous waste and those that regulate and protect species, habitats, and open space (i.e., ecosystems). It also includes a range of less straightforwardly “environmental” and somewhat more “economic” state agencies and programs that attempt to restructure human relationships with the natural world with a focus on environmental considerations, such as elements of the U.S. Department of Energy focused on nurturing renewable energy innovation (Veers et al. 2019); arms of the state that have led the push for a renewable “energy revolution,” as in Germany and China (Mathews 2015; Renn and Marshall 2016); and ministries and agencies that (attempt to) wield their financial muscle to change land development patterns in the wake of environmental disasters (Elliott 2021). As we will show, environmental states are both regulatory and developmental.

Scope Conditions

In setting out scope conditions that facilitate empirical study, we note that the environmental state is often defined in sweeping institutional terms, for example, the “set of institutions and practices dedicated to the management of the environment and societal-environmental interactions” (Duit, Feindt, and Meadowcroft 2016:6; for comparison, see Mol 2016:49, 2018:120). Defining the environmental state in a way that captures *all* state interventions into biophysical nature, however, poses serious conceptual and methodological problems. Fundamentally, because states have always played a central role in managing social and economic relations with the natural world (Lander 2021) and because the biophysical environment has always provided the material foundation for economic life (Foster and Clark 2020; Polanyi 1957),² broader definitions effectively collapse the environmental state into “the state” in general, leaving no conceptual means of distinguishing more recent state-centric efforts to regulate and moderate ecological harm from the state’s originating role in organizing society-environmental relationships, which date to the earliest state structures dedicated to accumulating wealth and waging war (Mann 1993; Scott 1998, 2017; Tilly 1992). The move also, if unintentionally, conflates the environmental state’s distinct politics of nature with social politics in general, relegating the central feature of environmental states to the background. Overly broad definitions also fail to establish clear analytic bounds delineating the environmental state, making anything like a comprehensive study of environmental states empirically impractical if not impossible. For this reason, our definition excludes elements of the state that play a central role in the “management of . . . societal-environmental interactions” (Duit et al. 2016:6) but that provide no or minimal environmental welfare, such as developmental, agricultural, and war-related ministries and programs with local and global ecological effects, but that generally undermine long-term ecological sustainability (see Hooks and Smith 2004; Jorgenson et al. 2023).³

Moreover, we presume no unity or coherence between the environmental state and the state as a whole (Morgan and Orloff 2017). As others have documented in detail, various elements of the state have long histories of supporting ecological degradation, environmental racism, and environmental injustice (Downey 2015; Pellow 2000, 2017), including elements of the environmental state itself (Cronon 1996; Jacoby 2001; Taylor 2016). Framed thus, tensions within the environmental state, for example, between conservation and environmental

justice (Harrison 2019; Perkins 2022) or between the provision of environmental welfare and other state prerogatives, such as promoting economic growth or national security (Downey 2015; Hooks and Smith 2004; Jorgenson et al. 2023), need not impede empirical study or foreclose the existence of environmental states as an analytic category. Instead, these intra-state tensions and incongruities become important features of the internal heterogeneity and endogenous politics of environmental states that need to be explained.

Our definition also does not include the intricate networks of nongovernmental organizations that interface with and influence the much larger project of environmental governance, for example, environmental nonprofit organizations that work closely with the state (see Fisher et al. 2021). Political sociologists and scientists have helpfully illuminated how delegated welfare provision (Morgan and Campbell 2011) and associational policymaking (Mayrl and Quinn 2016)—especially prominent in the United States—blur the boundaries between state and nonstate actors, and a rich literature makes clear that nongovernmental actors play a crucial role in providing environmental welfare (Brandtner 2022; Fisher et al. 2021; Fisher, Fritsch, and Andersen 2009; Fisher and Svendsen 2013). But collapsing this broader network of governmental and nongovernmental organizations into the definition of the environmental state breezes past the defining monopoly on legitimate forms of domination, uniquely possessed by state entities, that is central to environmental as to all forms of formal-legal regulation. It also risks erasing state/nonstate boundaries that delineate analytically important and substantively meaningful differences in governance and welfare provision across national contexts (Mayrl and Quinn 2016). Specifying such bounds is essential for distinguishing the environmental state from other parts of the state and closely related civil society organizations and thus for theorizing tensions and interactions between the wide range of organizations that constitute the broad field of environmental governance. It is also crucial for setting out testable claims about the historical origin points and causes of change to the environmental state specifically (Walker and Cohen 1985).

Analytic Presuppositions

Our conceptualization carries several presuppositions with important theoretical and methodological implications for the study of environmental states. First is that the concept of environmental welfare is historically specific and politically contested. We presume that the bounds and focus of the environmental state will shift in relation to changing understandings of these ideas and the political capacities of various factions to reshape environmental welfare provision in line with their visions, including shifting understandings of the relation between developmental and environmental ends pursued by the state. Explaining the emergence and evolution of environmental states is thus more than a political-economic project of theorizing material conflicts over resource use and ecological destruction. It is equally a cultural-historical project of identifying what “counts” (and has counted) as nature and as environmental welfare, how environmental and economic spheres are understood in relation to one another through time, and what ends are sought by whom, and when, in efforts to reshape state-led environmental governance.

Second, it follows that environmental states are diverse, internally inconsistent networks of power cobbled together over decades as understandings of environmental welfare change and balances of power between pro- and anti-environmental factions ebb and flow. This presupposition, long established in political-sociological state theory (Mann 1993; Morgan and Orloff 2017:7), is implicit in a growing number of accounts of environmental politics and governance in environmental sociology and beyond that directly and indirectly bring in the autonomy of the state (Skocpol, Evans, and Rueschemeyer 1985) and begin to specify

conditions when broadly pro- and anti-environmental factions push environmental governance in particular directions. Abers (2019), for example, captures the influence of environmental activists who work in the Brazilian bureaucracy. Angelo (2021) details how planners integrated green space into urban development in Germany. Perkins (2022) captures the uneven but notable incorporation of environmental justice advocates into California government. Elliott (2021) shows how intersections between state institutions and climate disasters transform the technocratic politics of risk into the moral politics of loss, which reshapes state responses to climate change. Explaining the environmental state's vast heterogeneity and uneven efficacy in environmental welfare provision requires careful and explicit theorization of environmental politics and institutions along these lines, which, per our first set of presuppositions, hinge on moral-cultural understandings of nature and justice as much as the political economy of environmental harm.

Third, our approach also assumes that the internal heterogeneity of environmental states and the politics that shape them grow out of a relatively small set of social structures and institutions that help determine the state's role in providing environmental welfare. The basic push and pull between pro- and anti-environmental factions, often in line with economic interests, is well appreciated in environmental sociology, although of late, political scientists have probably made more progress than sociologists in specifying the institutional conditions that support or hinder pro-environmental reforms in capitalist democracies (e.g., Dryzek et al. 2003; Hacker et al. 2022; Kitschelt 1986; Mildenerger 2020; Stokes 2020; Vogel 2018). Even these accounts, however, struggle to explain why some areas of environmental welfare provision are relatively robust while others wither or fail to take hold or how and why environmental welfare provision varies over long stretches of time. As we will argue, the theoretical key lies in identifying how the ecologically imbued politics of the environmental state are structured by cultural-ideological constructions of nature and by legacies of managing and protecting nature for economic development. A first step in understanding these structuring forces involves taking stock of what sociologists already know about environmental states.

ENVIRONMENTAL STATES IN SOCIOLOGICAL THEORY

Sociology as a whole has struggled to develop a sustained, theoretically motivated research program focused on the environmental state.⁴ This stands in stark contrast to the discipline's rich research traditions focused on the welfare state (Amenta 1998; Esping-Andersen 1990; Orloff 1993; Prasad 2012; Skocpol 1992), the developmental state (Block 2008; Evans 1995), and more recently, the carceral state (Wacquant 2009; Western 2006). The institutional preconditions and reasons for cross-national variation in the provision of environmental welfare or environmental rights, for example, have largely escaped the attention of political and historical sociologists long focused on the analogous provision of social welfare and social rights (partial exceptions, mostly outside sociology, include Dale 2020; Gough 2016; Kaup 2015; Meadowcroft 2005). Likewise, intensive study of the bureaucratic structures and networks that facilitate economic development and industrialization in developmental states has not, for the most part, spilled over into analogous investigations of the state structures and bureaucratic arrangements that support robust environmental regulation and protection (partial exceptions, again almost exclusively outside sociology, include Dryzek et al. 2003; Kitschelt 1986; Vogel 2012, 2018). A burst of sociological attention trained on the environmental state in the early 2000s reiterated the centrality of states to understanding environmental protection (Buttel 2000; Davidson and Frickel 2004; Fisher 2004; Fisher and Freudenburg 2004; Frickel and Davidson 2004) and highlighted the state's

contradictory role in facilitating economic growth (Mol and Buttel 2002), but this line of research stopped short of explaining, for example, environmental state strength or weakness within states or in a cross-national comparative framework.

Yet states clearly play a crucial and growing role in environmental governance and protection, and an expanding body of literature illuminates the politics and processes that shape these regulatory interventions. World polity theorists, for example, have charted the ways specific environmental governance institutions, such as environmental ministries and national parks, have diffused globally to become central features of modern states and have documented the ways that national linkages to international environmental agreements and organizations are associated with lower levels of national emissions (Frank, Hironaka, and Schofer 2000; Hironaka 2014; Schofer and Hironaka 2005). Others have identified factors that facilitate or limit large-scale industrial pollution, including state policies (Grant, Jorgenson, and Longhofer 2020; Perrow and Pulver 2015). Environmental historians have carefully documented how environmental movements have helped embed resource extraction and production processes into new state-led regulatory infrastructures around the world (Gottlieb 2005; Hays 1989; Shabecoff 2003; Uekotter 2009; for a sociological account, see Mol 2001). The result has been a dramatic improvement in air and water quality where regulation and enforcement are robust even as other problems, such as habitat loss and greenhouse gas emissions, worsen unevenly around the world (Currie and Walker 2019; Fenger 2009; Keiser and Shapiro 2019).

In attempting to explain changes like these, Rudel (2019) sees the state as central to translating exogenous social-ecological “shocks” into positive ecological reforms, and Mol (2001, 2016, 2018; Mol and Buttel 2002) describes states, in partnership with civil society, as key contributors to such “ecologically modernizing” reforms in highly industrialized economies. Fisher et al. (2009, 2021; Fisher and Svendsen 2013) have extended this point, illuminating how nonprofit and civil society groups are increasingly central to the provision of environmental goods (see also Brandtner 2022). Recently, researchers have begun to identify how bureaucratic structures and agency cultures shape environmental decision-making in the risk sciences (Demortain 2019) and constrain the uptake of environmental justice policies (Harrison 2019) in the U.S. Environmental Protection Agency.

Rich as they are, none of these studies or related bodies of sociological research offer an explicit means of explaining the development or variations in environmental protection and regulation within and between nation-states or a framework for understanding the state’s role in environmental regulation and protection more generally. The result is a rich canon of empirical and theoretical scholarship linking economic growth to ecological change (whether tending toward system collapse or sustainability) but an overall neglect of a thorough theorization of the environmental state itself: Its historical development, internal structure, and the political-ecological dynamics that shape its interventions into the natural and social worlds remain open questions. Thus, rather than returning to the basic conflicts between pro- and anti-environmental factions that shape environmental politics in general, we train our attention on two structuring social processes that we argue are central to understanding environmental state development and efficacy: culturally constructed natures and the developmental origins of the environmental state.

THE SPECIAL AND THE ORDINARY NATURE OF THE ENVIRONMENTAL STATE

Nature plays a unique role in the provision of environmental welfare as both the source of material sustenance necessary to sustain life and a critical cultural and symbolic resource

that shapes environmental politics and statecraft. As cultural construct, nature shapes the environmental state on at least three political-organizational levels.

First, culturally and historically specific understandings of nature shape environmental policymaking and regulation within the broader field of environmental politics. Hajer's (1995) canonical study of acid rain, for example, shows how eco-modernist constructions of that problem in the 1970s, 1980s, and 1990s structured policy responses to the harms of air pollution in the United Kingdom and the Netherlands. Angelo's (2021) study of urban and industrial development in the Ruhr valley in northwestern Germany shows how the cultural embrace of nature as a "universal benefit" was central to incorporating green space into urban planning in the region. Bargheer (2018) chronicles how culturally distinctive understandings of birds in Britain and Germany led to different protection regimes in each country that have only recently converged toward a common ecological model. Outside Europe, in the United States and other settler-colonial and colonized nations like Brazil, Australia, and Tanzania, scholars have extensively documented how culturally distinctive understandings of "wild" and "sublime" nature were integral to nation-building and imperialism, providing key supports for the expropriation of Indigenous lands, the intentional removal and killing of Indigenous people, and the closely related formation of national parks, forests, and large-scale wildlife preserves (Brockington 2002; Cronon 1996; De Andrade Franco and Augusto Drummond 2008; Lines 1991; Taylor 2016). The culturally constructed and historically specific embrace of charismatic megafauna, like bears, elephants, and whales, remains widely discussed as a central element of conservation politics worldwide (Lindsey et al. 2007). Similar dynamics work at subnational scales, too. Present-day conflicts over conservation and land use in the American West can be traced to culturally distinctive understandings of nature (Farrell 2015; Scoville 2019), and the often noted robustness of the environmental state in California is likely linked to the cultural celebration of particular forms of nature found there, for example, Yosemite Valley and giant redwood trees (Vogel 2018).

Second, at the slightly more granular level of environmental law, culturally and historically particular constructions of nature are woven into the legal doctrines and administrative structures of environmental states. Jerolmack (2021), for example, details how historically peculiar codifications of mineral rights intersect with libertarian currents in U.S. politics to make rural landowners supportive of hydraulic fracturing—even when the practice harms them, their neighbors, and the land they hold dear. Scoville (2022) traces how different understandings of nature in conservation science and in law co-evolve over time, shaping environmental politics and conflicts over endangered species in particular. Fourcade (2011) shows how old socio-legal conceptions of nature in France, where many natural resources are legally held in common but overseen by no one in particular (the doctrine of *res nullius*), can lead to low pecuniary valuations of nature in cases of liability for environmental harm. In the United States, by contrast, where nature is understood as held in trust for the public by the state (the *public trust doctrine*), ecological systems are assigned much higher monetary values. The contemporary global movement for the "rights of nature" reveals just how deep these legal-cultural institutions reach. In attempting to codify what are often Indigenous understandings of nature into legal systems with mostly Western and imperial roots, the movement highlights the dominion-based legal-cultural foundations of the Western state's relationship with the natural world (see White 1967)—so much so that granting rights to inanimate rivers, grasses, and mountains seems almost unthinkable and is, in any case, legally difficult (Borràs 2016; Norgaard 2019; Stone 1972).

Third, distinctive understandings of nature are also refracted through the much more particular organizational structures and governance mandates of specific ministries and agencies *within* the environmental state, with important implications for the politics that shape

these lower-level organizational units. Given timber's centrality to early economic development, for instance, forestry departments tend to understand forests as large stocks of natural resources and as critical inputs into production systems (Fernow 1907; Scott 1998). But forests can also be and often are understood as dynamic ecosystems, sacred wildernesses, national icons, and most recently, large carbon stocks (Cronon 1996; Gundersen et al. 2021; Wilson 2016). As a result, it is not uncommon for forests to attract high levels of political support from sympathetic publics and environmental groups and thus for forestry departments to find themselves embroiled in political-ecological conflicts that challenge dominant natural resource framing in favor of alternative understandings and different uses of these ecosystems (Gottlieb 2005; Hays 2009).

Ministries and bureaus that govern toxic waste disposal and pollution, by contrast, embed quite differently into cultural constructions of nature. Just like forestry departments, these ministries and agencies are also often embroiled in political-ecological conflicts; regulating the production and disposal of waste and pollution puts these arms of the environmental state in clear tension with industrial production processes at the center of modern political economies (Demortain 2019; Grant et al. 2020; Pellow and Brulle 2005). But the clean drinking water, clear air, and livable environments these ministries are tasked with providing tend to carry very different cultural resonances and far less symbolic power than the forest and wildlife preserves governed by other parts of the environmental state. Rather than majestic alpine vistas and reintroduced wolf populations, environmental welfare goods like neighborhoods with clean air, water, and soil tend to fade into the cultural background and are often taken for granted, especially by middle-class and wealthier publics and elites who are comparatively insulated from the most egregious forms of pollution and environmental racism (Pellow 2000, 2007; Perkins 2022; Taylor 2014). The comparative invisibility of such forms of environmental welfare, when they are provided, is the probable reason that individual-level environmental concern tends to *decline* as country-level affluence (and thus environmental quality) increases in middle-income and wealthier nation-states around the world (Fairbrother 2013; Summers and VanHeuvelen 2017).

Special and Ordinary Natures

We argue that these culturally mediated environmental politics are central to understanding the development and evolution of environmental states. Any element of the environmental state with a prominent regulatory or resource management role is likely to find itself embroiled in political contention, but we posit that ministries and agencies that provide environmental welfare linked to culturally resonant forms of nature—what we label *special nature*—will be far more likely to be pressured by pro-environmental factions demanding the expansion or strengthening of environmental welfare provision, even as these agencies and ministries also encounter anti-regulatory counterpressure. Conversely, we posit that ministries and agencies that provide forms of environmental welfare that are less culturally resonant and therefore more easily taken for granted—what we label *ordinary nature*—will be far less likely to garner substantial support from pro-environmental factions, even while these agencies and ministries are still likely to evoke the anti-regulatory ire of industry groups and other organizations opposed to environmental regulations that disrupt their business models or ideological sensibilities. The particular sorts of nature treated as “special” or “ordinary” will vary through time and across empirical contexts, in line with historically specific understandings of natural ecosystems and negotiated settlements to political ecological conflicts in given times and places (Fligstein and McAdam 2012).

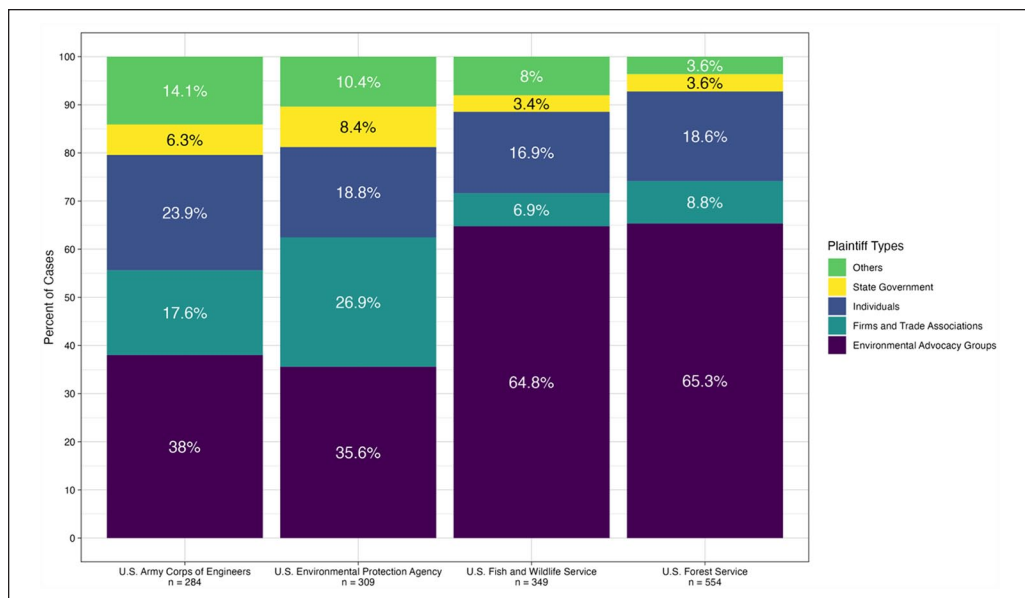


Figure 1. Proportions of litigation brought by different plaintiff types against four major elements of the U.S. environmental state.

Source: Data compiled from NexisUni by the Rea Environment and Society Lab. Visualized by the authors.

Note: The Army Corps and U.S. Environmental Protection Agency provide environmental welfare principally linked to ordinary nature. U.S. Fish and Wildlife Service and the Forest Service provide environmental welfare principally linked to special nature.

Admittedly, the distinction we draw is a substantial simplification. We hope future work shows our binary classification is too narrow and details how different cultural understandings of nature differently shape environmental politics in specific national and cultural contexts. We also expect the basic bifurcation between special and ordinary nature might hold in a surprising range of contexts. Empirical investigation of the U.S. case, for one, suggests different elements of the environmental state experience political contention in line with this distinction, particularly as made visible in patterns of environmental litigation (see Figure 1).

The U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers are two prominent units of the U.S. environmental state that overwhelmingly focus on the provision of what, in the contemporary United States, can be classified as ordinary nature. The EPA is the principal national regulator of air and water pollution and the industrial processes that produce these environmental “bads.” In partnership with the EPA, the Army Corps enforces large portions of the Clean Water Act, especially parts of the law that regulate dumping, dredging, and filling waters of the United States. Neither agency plays a substantial role in the management of open space, charismatic species, or iconic landscapes (i.e., special nature). Both agencies are routinely sued by parties challenging their regulatory actions. About a third of those suits come from pro-regulatory environmental advocacy groups pushing for more stringent applications of environmental laws. The substantial plurality, 40 percent or more, stem from individuals, firms, and trade associations demanding less robust regulatory requirements. At best, these two components of the U.S. environmental state experience about equal shares of pro- and anti-regulatory political-legal pressure.

By contrast, the U.S. Forest Service and the U.S. Fish and Wildlife Service (FWS) are arms of the U.S. environmental state that focus overwhelmingly on the provision of special nature.

The Forest Service manages the vast national forest stocks of the United States, which, in addition to supporting the harvest of timber valued at \$152.4 million in 2021 (Riddle 2022), also include thousands of recreational campgrounds and more than 150,000 miles of roads and trails used by hikers, backpackers, hunters, and other outdoor recreationists. The FWS enforces the Endangered Species Act (ESA), a law that protects species at risk of extinction even when such protections are at odds with economic growth. FWS also manages hundreds of millions of acres of National Wildlife Refuges widely used by the public for various forms of outdoor recreation, including hiking, birding, hunting, and fishing. Neither agency plays any substantial role in regulating waste or toxic pollution (i.e., ordinary nature).

Like the EPA and Army Corps, the Forest Service and FWS are constantly embroiled in legal-environmental conflicts. The Forest Service is sued more often than any other unit of the U.S. environmental state. Also like the EPA and Army Corps, the Forest Service and FWS implement laws and manage lands in ways that have direct implications for the political economy. The Forest Service oversees highly contentious extractive processes, especially logging, across the United States (Hays 2009; Widick 2009), and FWS's enforcement of the ESA puts it in direct conflict with land and industrial development and resource use in ways that routinely evoke anti-environmental backlash (Plater 2013; Scoville 2019, 2022). But the quality of the legal pressure experienced by the Forest Service and FWS is markedly different than that experienced by the EPA and Army Corps. Roughly two-thirds of the lawsuits targeting the Forest Service and FWS are brought by pro-regulatory environmental advocacy groups; only around a quarter are brought by firms, trade associations, or individuals pressing for less stringent enforcement of environmental laws. The overwhelming majority of legal contention experienced by the FWS and Forest Service pushes these agencies to strengthen and expand their provision of environmental welfare—environmental welfare that is explicitly linked to culturally resonant forms of special nature.

Outwardly, these cross-agency differences in legal contention in the U.S. environmental state are explicable in terms of the content and structure of environmental law and its relation to differing governance mandates. More fundamentally, these divergent patterns of environmental-legal contention are artifacts of the ways culturally particular understandings of special and ordinary nature are inscribed into law and then integrated into the governance mandates of specific agencies and ministries. In the United States, the EPA and Army Corps manage forms of nature that evoke a different quality of politics than the politics evoked by the forms of nature managed by the FWS and Forest Service. More generally, culturally imbued and organizationally delineated legal inscriptions of particular understandings of nature pattern environmental political contention and thus shape the development of the environmental state and the provision of environmental welfare. The legalistic expression of these differences is a pronounced feature of the U.S. (environmental) state (Rahman and Thelen 2021), but we suspect analogous data in other national contexts will reveal similar patterns of support and resistance for environmental welfare provision, modulated by the intersections of cultural constructions of natural ecosystems with the specific governance mandates of particular environmental state agencies and ministries.

DEVELOPMENTAL LEGACIES OF ENVIRONMENTAL STATES

The scholarly consensus is that the modern environmental state emerged in the last third of the twentieth century (Duit et al. 2016; Mol 2018). Social scientists have paid far less attention to the historical-organizational antecedents of these new arms of the state. Understanding the origins of environmental agencies and ministries is critical, however, because most of these new administrative organizations were not built from scratch. Rather, like all

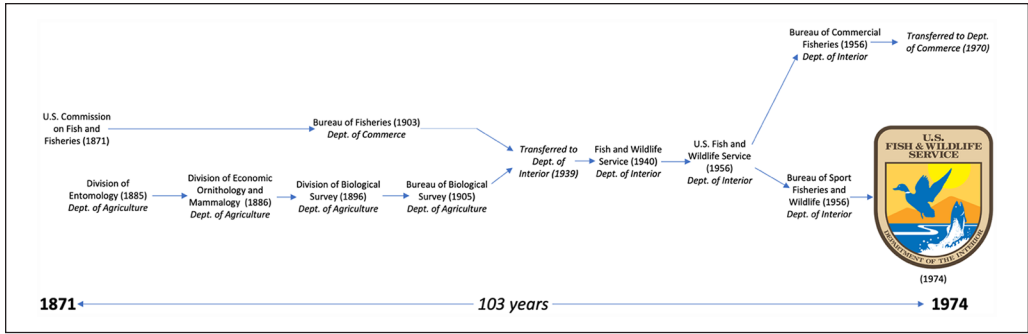


Figure 2. Administrative history of the U.S. Fish and Wildlife Service.

Source: Adapted from Cortese and Groshek (1987).

organizational forms, they were repurposed and transmuted from preexisting organizational grist (Padgett and Powell 2012)—in this case, earlier elements of the state and the bureaucracy.

Overwhelmingly, the organizational precursors of the modern environmental state were developmental, with administrative and structural roots reaching back to resource management projects intended to make nature “legible” to the state and support economic productivity (Scott 1998).⁵ One among many examples across national contexts is the modern-day U.S. Fish and Wildlife Service, discussed previously. For most of its prehistory, FWS did not focus on the provision of environmental welfare as would be understood in the present day. The modern agency was created in 1940 by combining the U.S. Commission on Fish and Fisheries (established 1871) and the Bureau of Biological Survey (established 1905; see Figure 2). For decades, the Commission focused not on the protection of piscine ecosystems but instead on the artificial “propagation of food-fishes in the waters of the United States” through partnership with groups like the American Fish Culturists Association (established 1872) and by creating a network of state-run fish hatcheries, still active today, used to prop up ailing commercial and recreational fisheries (Baird 1874). Tellingly, the Commission was integrated into the U.S. Department of Commerce when that department was created in 1903. The Bureau of Biological Survey grew out of the Department of Agriculture’s Office of Economic Ornithology (established 1885) and focused on managing birds and mammals, as one ranking official put it in 1899, “from the standpoint of dollars and cents” (Palmer 1899:259). Throughout its history, the Survey focused on illuminating the economically beneficial or destructive effects of various animal species and developing policy accordingly. One summary report cataloged the results of tens of thousands of bird stomach dissections, which were used to ascertain whether specific species ate crops or consumed agriculturally harmful insects (Palmer 1899:265). Species revealed to be economically beneficial were afforded protections (e.g., owls and hawks, previously understood as agriculturally harmful “vermin”), and those understood as genuine pests were destroyed. Another report from 1908 celebrated the killing of 1,800 wolves and 24,000 coyotes, a massacre estimated to avert \$2 million (about \$57 million in 2020) in livestock losses (Merriam 1908:4).

The developmental origins of environmental state ministries hold around the world. As with the U.S. case, German state involvement in managing bird populations stems from late-nineteenth-century efforts to cultivate beneficial species and destroy economically harmful ones (Bargheer 2018). Also in Germany, as in many nation-states, the forestry department remains embedded within the fundamentally developmental Federal Ministry of Food and

Agriculture. In Brazil, the earliest environmental ministries also focused on forest management and economic production, to the chagrin of early conservationists (De Andrade Franco and Augusto Drummond 2008). In Japan, pollution control laws were embedded in, among others, the Ministry of Trade and Industry (Sumikura and Osborn 1998). In revolutionary France, keystone species such as wild boar and wolves were targeted for eradication because of perceived threats to the health of forests, and the earliest seedlings of a nascent environmental state embodied in the 1827 Forest Code focused on the rational management of timber resources for national development, including preferential selection of trees by the navy for use in shipbuilding (Matteson 2015).

Developmentalism, Environmental Coalitions, and Intrastate Heterogeneity

There are two reasons why recognizing the developmental roots of environmental state agencies is essential for theorizing the emergence and evolution of environmental states around the world. First, developmental legacies help explain the composition of contemporary political coalitions that support and resist specific elements of the environmental state. We have already detailed some of the ways the U.S. FWS has been repurposed with a more substantively ecological mission since the 1970s, for example, through enforcement of the ESA. But new mandates to provide environmental welfare did not erase old developmental legacies, their institutional underpinnings, or their constituencies of political support.

In line with its historical roots, FWS remains heavily focused on supporting game populations and recreationally pursued fish species, and New Deal-era fiscal institutions linking conservation funding to gun sales (ostensibly by way of hunting) remain a central source of agency revenue (Casellas Connors and Rea 2022). As a result, FWS retains strong political support from conservative-leaning fishing and hunting organizations like Trout Unlimited and Ducks Unlimited and shooting and gun advocacy groups like the National Sport Shooting Federation and National Rifle Association (Duda et al. 2022). This right-leaning political support intersects with support won from newer agency mandates focused more squarely on environmental welfare. Enforcement of the ESA, for example, wins the critical support of a wide variety of modern environmental movement organizations, like the Sierra Club and Natural Resources Defense Council—largely left-leaning constituencies in contemporary U.S. politics that also file many of the lawsuits noted previously (see Figure 1). Old developmental legacies are central to understanding these modern, and sometimes surprising, coalitions that continue to shape elements of the environmental state and that link back to politics evoked by agency affinities with special and ordinary nature.

Second, developmental legacies also help explain the modern environmental state's internal heterogeneity, including contradictions and conflicts that can emerge when incongruous institutions and values intersect. Old ministries and bureaus with deep developmental roots may be especially prone to internally conflicting governance mandates. Per foundational legislation of 1897, for example, the U.S. Forest Service is charged with furnishing “a continuous supply of timber for the use and necessities of citizens of the United States” (U.S. Congress 1899:35) while also, per legislation enacted in 1960, managing land for “outdoor recreation, range, timber, watershed, and wildlife and fish purposes” (U.S. Congress 1961:215)—even when these uses directly conflict, as in the so-called timber wars of northern California (Widick 2009).

The much newer U.S. EPA, by contrast, is a prominent exception to the environmental state's generally developmental history. Created by executive order by President Nixon in 1970, the EPA consolidated duties related to pollution regulation and public health that had emerged across the federal government in the 1950s and 1960s into a single administrative

unit responsible for pesticide regulation, air quality control, hazardous waste, and toxics regulation (Demortain 2019; Hays 1989; Moe 1989). As a result, EPA's governance mandate is more internally consistent, focused on regulating major polluters. But a clearer focus on environmental welfare comes at a cost: EPA's regulatory actions are regularly perceived to inhibit economic growth, making it a perpetual target for political attack (Demortain 2019) and relegating its base of popular support to advocates for environmental health and pollution regulation—a narrower (and increasingly partisan) political constituency than that enjoyed by, for example, FWS.

More generally, the historical development of different elements of the environmental state helps reveal the origins of the politics that continue to shape it. Popular and scholarly focus on exceptional environmental ministries like the EPA, with relatively short administrative histories, obscures the developmental legacies of most other, older environmental state agencies. These older agencies carry historical constituencies of support (or resistance) onto new political and institutional ground and reveal the developmental sources and contradictions of their governance mandates. An important theoretical implication is that agencies of the environmental state that interweave developmental and environmental welfare prerogatives may be more likely to develop cross-cutting coalitions of popular political support, from both supported industries and environmental advocates, but their provision of environmental welfare may be compromised by internally conflicting governance mandates linked to their developmental pasts. Agencies and ministries with a more coherent focus on environmental welfare may be less prone to undermining their own provision of environmental welfare (e.g., by providing direct support for extractive industries), but they may also be more likely to be perceived as anti-developmental obstacles to economic prosperity and face staunch political resistance. A key area of theoretical and empirical focus for scholars of the environmental state will be investigating how these different political configurations and their attendant political coalitions link to distinctive administrative histories and, in turn, to the differential effectiveness of specific environmental governance mandates in contemporary contexts.

Attending to the developmental history of the environmental state also raises several complex questions linking the cultural construction of nature, discussed previously, to the environmental state's origins and ongoing development. How have changing conceptions of nature shaped the relative developmental and ecological focus of environmental states (or parts thereof) through time and across national contexts? How do old developmental roots limit the environmental state's capacity to transform in light of new conceptions, for example, the growing embrace of the idea that we have entered the Anthropocene (Chernilo 2017)? From a cross-national comparative perspective, how might newer environmental ministries in developing countries and the Global South, born of not only regionally but also historically distinctive ecological sensibilities, differently configure the tensions and contradictions between developmental and environmental prerogatives in nascent environmental states? And what lessons do the divergent experiences of developmental (e.g., FWS) and nondevelopmental (e.g., EPA) elements of the environmental state hold for the challenges and opportunities for strengthening environmental governance *within* particular environmental states? To develop a stronger sense of these intersections, we turn to the ways that culturally particular conceptions of nature and developmental legacies mutually condition the meso-level environmental politics of regulation and technoscientific expertise.

ENVIRONMENTAL POLITICS OF REGULATION

As with all other parts of the state, an environmental agency's regulatory role helps determine its structural embeddedness in political-economic and political-ecological conflict. Even in its

earliest developmental incarnations, when environmental regulation was weak, conflicts were endemic to state-led efforts to regulate natural resource use, for example, between fish mongers and the U.S. Commission on Fish and Fisheries (Baird 1873) or between the timber industry and the early U.S. Forest Service (Hays 2009). Basic conflicts between environmental regulation and industrial production are central to the politics of environmental protection.

But regulatory dynamics are not always straightforwardly adversarial, and culturally particular understandings of nature and developmental legacies also shape the politics of environmental protection. As formerly developmental agencies were repurposed to provide environmental welfare in last third of the twentieth century, the distribution of new regulatory roles within environmental states was generally uneven, concentrating regulatory responsibilities in some but not all agencies. This unevenness, in turn, was historically contingent, linked to the developmental past of the environmental state. In the United States, the Army Corps of Engineers's intimate infrastructural knowledge of the nation's waterways—by way of building dams, channeling rivers, and draining wetlands to “reclaim” agricultural land—made the agency a natural, if ironic, choice for administering large portions of the Clean Water Act. The FWS's roots in the U.S. Bureau of Biological Survey—including its support for the extermination of agricultural “pests” such as wolves and other endemic species hunted to the brink of extinction—gave way to that agency's responsibility for implementing the ESA. And so on across the environmental state: Developmental pasts, no matter how antithetical to contemporary understandings of environmental welfare, shaped the distribution of present-day regulatory responsibilities and thus the political-economic (and political-ecological) conflicts those regulatory roles invariably evoked.

New regulatory responsibilities were not only political liabilities. Assuming responsibility for implementing new environmental laws afforded ministries legitimacy, political support, and broader salience in the field of environmental politics and governance. To the extent that regulations are shaped by regulated industries themselves (i.e., in cases of capture) or when regulations serve as barriers to entry for would-be competition in established industries, agencies with prominent regulatory roles may actually enjoy some support from regulated entities (Carpenter and Moss 2014). Regulations also provide an important source of external legitimacy for the state and its representatives, even when enforcement is weak and compliance is largely symbolic (Edelman 2016; Schneiberg and Bartley 2001; for discussion with respect to environmental states, see Fisher and Freudenburg 2004; Frickel and Davidson 2004). As a result, agencies with regulatory responsibilities are likely to enjoy substantial support from some elected officials, who often have an interest in at least *appearing* to enforce popular environmental rules and standards. This symbolic compliance may do little to address environmental problems in the short run, but it can have long-term, substantive effects. As Mann (1993) points out, where particular forms of (environmental) welfare and (environmental) rights are promised, they often come to be expected, and formal regulations as well as widely embraced environmental ideals, even when far from realized in practice, can provide legal and political footholds for nongovernmental organizations and publics to press for meaningful state-led environmental change.⁶

Environmental advocacy groups, for instance, have successfully used the courts to expand environmental welfare provision in the United States over the past several decades, pushing for more expansive interpretations of waters governed by the Clean Water Act (Rea 2019), marshaling the politics of expertise to force the regulation of greenhouse gasses under the Clean Air Act (Freeman and Vermeule 2007), and using the ESA to inject environmental considerations into infrastructure projects in ways never anticipated by the statute's authors (Petersen 1999; Scoville 2022). Even comparatively marginalized and distinctively “outsider” environmental justice organizations have made inroads into the U.S. environmental state, albeit with marginal effects (Harrison 2019; Perkins 2022). Regulatory responsibilities thus create

opportunities for interest groups and movements to expand as well as restrict the provision of environmental welfare by the environmental state.

The cultural salience of different kinds of nature also shapes regulatory dynamics and the politics they engender. We reiterate that protecting iconic national landscapes in the contemporary U.S. West (Farrell 2015) evokes a different politics than managing wolves in revolutionary France (Matteson 2015) or regulating natural gas extraction in modern-day rural Pennsylvania (Jerolmack 2021). These differences are not reducible to political-economic interests. Enforcing conservation policy and protecting iconic species, such as bison and wolves in the greater Yellowstone ecosystem, generates basic political-economic tensions and is perceived to inhibit livelihoods and profitmaking, just as regulating hydraulic fracturing does. But bison and wolves, to say nothing of Yellowstone and the Teton Mountains themselves and therefore the agencies that regulate them, can count on constituencies of support across the nation and the world, drawn in by cultural affinities for these iconic examples of special nature. Invisible groundwater polluted by fracking effluents, by contrast, and ordinary nature more generally, operate with a different cultural resonance—one that travels less easily across space and through populations removed from its direct effects (see Dokshin 2021).⁷ Agencies with regulatory roles focused on such forms of environmental welfare, in turn, may be less likely to win broad public support for their regulatory mandates—mandates they may have inherited given historically developmental roles or, as in the case of the EPA, that were thrust upon them in a moment of rapid environmental-administrative reform. Sorting out how these kinds of cultural resonances and developmental histories intersect to shape environmental regulation points to another meso-level process central to environmental politics: the ways environmental states mobilize technoscientific expertise.

ENVIRONMENTAL POLITICS OF TECHNOSCIENTIFIC EXPERTISE

Human impacts on the biophysical world are increasingly understood through the lenses of natural and technical sciences like biology, toxicology, ecology, atmospheric chemistry and physics, hydrology, and engineering—areas of expertise that have flourished and professionalized in parallel with the environmental state's own development (Bocking 2004; Frickel 2004; Hays 1989; Nash 2006). The resulting politics of expertise works from within and without the environmental state. Endogenously, bureaucrats and agency leaders marshal their organizational expertise to assess environmental impact, moderate conflict, build reputation, and establish legitimacy (Carpenter 2001, 2010; Demortain 2019; Oppenheimer et al. 2019). More exogenously, environmental movement organizations leverage their expertise to gain disproportionate access to legislative hearings (Ganz and Soule 2019) and advocate for environmental justice (Ottinger and Cohen 2011). Anti-regulatory organizations build counter-expertise to slow regulatory momentum on everything from greenhouse gas emissions (Brulle 2022; Lahsen 2008) to endangered species (Scoville 2019) to chemicals (Creager 2021). Technoscientific expertise is thus doubly important for theorizing the environmental state. First, science is a central source of environmental knowledge and environmental policymaking (Jasanoff 1990) as well as a principal source of agency reputation, authority, and autonomy (Carpenter 2001, 2010). Second, it is a focal point of political contention that offers entrepreneurial bureaucrats, movement organizations, industry groups, and scientists themselves a foothold for expanding or challenging state regulatory authority and control over society-environment relations—including by challenging expertise itself (Jasanoff 2006; Moore et al. 2011; Scoville 2022).

Like regulation, technoscientific expertise is organized by the developmental and, more broadly, the organizational histories of environmental state ministries. The EPA's roots in public health, the FWS's roots in wildlife management, and the Army Corps's roots in infrastructure development (to say nothing of its embeddedness in the U.S. military) all shape the

organizational structure and suites of professions that dominate these elements of the environmental state. Professionalization in general can act as a central source of bureaucratic autonomy important for understanding state development (Carpenter 2001), but the composition of professions and their attendant expertise are also crucial for explaining how agencies approach the provision of environmental welfare, from historical approaches to forest management (Carpenter 2001) to the contemporary management of environmental risk (Demortain 2019; Elliott 2021) to the incorporation of environmental justice, or lack thereof, into environmental governance mandates (Harrison 2019). Agency histories organize the distribution of expertise across the environmental state, and the distribution of expertise helps organize the politics that shape the provision of environmental welfare.

Technoscientific expertise is also filtered through culturally distinctive understandings of nature in ways that shape environmental welfare provision, sometimes in surprising ways. Across disciplinary and expert domains, culturally resonant and widely held understandings of nature as intrinsically valuable are especially important. In recent years, sociologists have dedicated considerable attention to a countervailing trend: the rise of economic expertise, including the different ways professional economists have influenced policymaking across national contexts (Fourcade 2009) and how economic thinking has come to dominate U.S. policymaking in particular (Berman 2022). Market-based environmental policy instruments, for example, emissions trading and payments for ecosystem services schemes, are frequently cited examples (Büscher, Dressler, and Fletcher 2014; Jordan, Wurzel, and Zito 2013).

Early incarnations of the environmental state, however, emerged when economic thinking was less well institutionalized. In the United States, many foundational environmental statutes born of the 1970s continue to exclude economic rationales or specific methodologies (e.g., consideration of costs and benefits) from the criteria that can be used in some of the most crucial components of environmental policymaking, such as deciding when to extend legal protection to an endangered species under the ESA (Baldwin 2001) or when setting limits for air pollution under the Clean Air Act (Bachmann 2007; Congressional Research Service 2017). The biophysical sciences themselves, which provide the foundation for much of environmental policymaking, seem to share an elective affinity with moral-cultural celebrations of nature as intrinsically valuable (see McCauley 2006).

As a result, an implicit moral-cultural framing of the intrinsic value of nature and ecosystems (Borràs 2016) and the distinctive logics of the biological and earth sciences, independent of economic reasoning, remain central to environmental politics and governance in the United States and around the world (Drori et al. 2003). Conflicts between these moral-scientific ways of understanding nature, on the one hand, and more recently ascendant economic logics, on the other, are therefore key structuring forces that shape the politics of expertise within the contemporary environmental state, including the complex ways that economic logics, biophysical science, and state authority entwine in outwardly market-based approaches to environmental welfare provision (see Rea 2017; Vatn 2015). Beyond the requisite attention to disciplinary expertise and its influence on environmental policymaking, a fully sociological treatment of the environmental state will need to account for how these culturally refracted understandings of the value of nature shape the production of environmental knowledge and the provision of environmental welfare.

TOWARD A SOCIOLOGY OF ENVIRONMENTAL STATES

The framework we outlined here offers a starting point for the sociological study of environmental states. Instead of trying to develop a complete theoretical account, we offer what we hope will be a solid foundation for empirically robust historical-causal accounts of environmental state effectiveness and failure in capitalist democracies. We provide a theoretical

framework for identifying and understanding common dynamics in environmental states as they vary internally and across cases, and we highlight specific features of environmental states that we suspect are central to navigating and intervening in environmental governance.

As elaborated, our account owes much to prior scholarship. It is substantively informed by the field-theoretic and network approaches of institutional and organizational scholars of states and politics, political and historical theories of social welfare and state development, and theorizations of socially constructed nature and environmental political economy pioneered by sociologists of culture and environment. Beyond whatever value such synthesis holds, we believe our approach and framework offer at least three novel and substantively important contributions.

The first contribution is definitional. We define the environmental state more narrowly than most extant studies by focusing on governmental institutions and organizations that aim to reorganize production and consumption to provide environmental welfare and uphold environmental rights. This refinement has three pragmatic functions. Conceptually, it frees environmental states and environmental politics from a structural-functional dependence on capitalist growth imperatives or the dynamics of technoscientific innovation and instead pinpoints the locus of much environmental politics: implicit or explicit claims to environmental rights and related efforts to push the state toward or away from the provision of environmental welfare. This creates analytic space for investigating states' embedded autonomy to pursue interventions in nature that are contingent, indeterminate, and multidirectional—that is, tending toward or away from the prioritization of environmental issues (Fisher and Jorgenson 2019)—and centers attention on the contentious politics that shape the state's attempts at environmental protection and regulation. Methodologically, it allows researchers to more cleanly demarcate environmental states—heterogenous networks of governmental organizations and policies united by a common focus on environmental welfare—from national bureaucracies in their totality and thus to pursue the study of environmental states as apart from “the state” as a whole. This move also makes it possible to systematically investigate environmental welfare provision and to set those efforts in explicit theoretical relation to other state activities, like waging war or supporting social welfare. Empirically, it encourages the mobilization and integration of administrative and ecological data in research designed to measure the environmental state's action toward nature vis-à-vis environmental welfare. This is an important first step if one's ultimate goal is to understand the environmental state's material effects on nature (see Frickel and Rea 2020).

The second contribution is to illustrate the value of centering nature within sociological state theory. What we call environmental politics weaves nature (as social construction) into administrative history and equally embeds biophysical nature (forests, bird populations) within the state's continuously evolving and contested efforts to differentiate, organize, and regulate society-environment relations. Framed thus, the features and dynamism of environmental states are born of the cultural specificity and diversity of nature as much as they are born of conflicts over material resources or directly experienced ecological harms. In the abstract, this grounding argument positions nature in both cultural and material forms as a constitutive and constituting element of state structure, conflict, and change. More concretely, it sets the stage for empirical investigations of the ways the politics of nature—special and ordinary nature, for example—structure environmental politics and governance such that some areas of environmental welfare provision (e.g., land conservation and species protection) tend to be comparatively robust whereas others (e.g., climate, toxic pollution, and related issues of environmental [in]justice) tend to be comparatively weak. We note again that entirely political-economic explanations often struggle to explain such differences. Not least, centering nature in state theory offers a jumping-off point for theorizing

state-led governance in a climate-changed, anthropogenic world, where phenomena like droughts, wildfires, hurricanes, and changing ecosystems unavoidably, routinely, and disruptively intervene into daily life in ways that demand new and changing forms of state intervention and welfare provision (see Elliott 2021).

The third contribution is to bring environmental sociology into much more direct conversation with the rich fields of political and historical sociology. We place institutional and organizational path dependencies at the center of our account of the environmental state. No sociological treatment of the environmental state or its subelements can explain its effectiveness or its failures—or hope to explain variance within and between environmental states around the world—without attending to the historical-organizational roots of the distinctive ministries, agencies, and nation-states as a whole that these newer state structures were born from. Nor can such work expect to succeed without attending to historically specific conceptions of nature and human relations to it. As a serious treatment of the social construction of nature stands to enrich political-sociological (and historical-institutionalist) accounts of state formation and governance, a serious treatment of state history and institutions stands to enrich environmental sociological accounts of environmental politics, regulation, and expertise.

As a starting point for the study of environmental states, the theory we develop here demands extensions and refinements in several areas. Most fundamentally, the study of environmental states is an inherently comparative project whose theoretical and socio-ecological significance warrants sustained attention not just in environmental sociology but across the discipline. At the level of cross-national comparison, any serious account of environmental states must be able to accommodate the vast empirical differences in geopolitical history, territorial size and ecology, political-institutional organization, and economic, military, and cultural specificity that characterize modern nation-states and their efforts, however variable, to provide environmental welfare. Accounts with roots in the Global South are particularly important for improving the theoretical sketch we outline here, where a range of distinctive patterns, from the legacies of Northern imperialism to distinctive ecologies and environmental threats, play important roles in shaping environmental politics and, no doubt, the development of distinctive environmental states (see Brockington 2002; Chandrashekeran et al. 2017; Death 2016; Holleman 2018; Martinez-Alier 2002). At the level of intranational comparison, any serious account must also be able to differentiate and specify relations between the environmental state and other elements of the nation-state, such as those providing military defense or social welfare—tensions and conflicts we gestured toward but did not substantially elaborate. Such investigations are essential for explaining how environmental considerations relate to other state prerogatives, including how considerations of environmental welfare are or are not taken up within a range of state activities, from housing policy to military operations to information and transportation infrastructure (Bunker and Ciccantell 2005; Hooks and Smith 2004; Jorgenson et al. 2023). Environmental states, after all, encompass a range of policies, programs, and professionals that must integrate considerations of environmental welfare into all manner of activities, from environmental impact assessments to carbon accounting to requirements for various forms of ecological “mitigation” and “adaptation” wherever state-sanctioned activity generates environmental harm. These, too, demand comparative treatment.

There are ample opportunities to extend the theory into adjacent areas of environmental scholarship. For example, while our definitional focus on the state’s attempts to provide environmental welfare pushes analysis toward the political conflicts that shape these efforts, it does not directly specify the environmental state’s role in promoting or constraining environmental justice. Yet reigning conditions of environmental inequality—including those promulgated by environmental states—shape future prospects for environmental and climate justice


and raise a host of crucial theoretical, empirical, and normative questions: How do environmental welfare and environmental justice relate in principle? How do environmental states integrate considerations of justice into the provision of environmental welfare in practice? And how *should* environmental justice and environmental welfare be related? Future attention to such questions will help sharpen diagnosis of environmental politics by illuminating obstacles to and opportunities for the formulation and provision of environmental welfare that is at once life-supporting, justice-focused, and equitably implemented.


More broadly, and in the context of sociology's relative inattention to environmental state theory—a topic that has belatedly taken on global existential urgency—we hope this article's contributions will encourage other scholars to chart a shared path toward a more fully sociological accounting of environmental states and their politics. Considerable intellectual progress will be made, we think, by attending to the concrete and observable relations of power between individuals, groups, and organizations embedded in specific cultural, organizational, and historical contexts, which collectively shape state interventions into nature and, equally, nature's contouring of state administrative, developmental, and regulatory practice.

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NOTES

1. Space constraints prevent us from fully elaborating the notion of environmental rights, but for a review of this concept, see Eckersley (2020). In invoking the term, we intentionally draw an analogy to the role of welfare states in attempting to provide social rights (Esping-Andersen 1990; Gough 2016; Marhsall 1950).
2. The Marxian roots of this point are well developed in environmental sociology. Polanyi's environmental sociology is less well appreciated (Brechtin and Fenner 2017; Kaup 2015).
3. We note, however, that shoots of the environmental state may sprout up in unexpected and even decidedly destructive arms of the state, like in the military (see Coates et al. 2011).
4. Most environmental-sociological accounts look past the environmental state and focus on the broader state's support for economic growth and thus environmental degradation. A large literature, for example, connects state-supported capitalist accumulation to planetary ecological harm (Bunker and Ciccantell 2005; Foster and Clark 2020; Jorgenson 2014; Moore 2015; Rudel, Roberts, and Carmin 2011; Schnaiberg 1980; York, Rosa, and Dietz 2003). A handful of scholars have interrogated the ways the state's broad military prerogatives exact both socially unjust and ecologically destructive outcomes (Downey 2015; Hooks and Smith 2004; Jorgenson et al. 2023; Lengefeld, Hooks, and Smith 2021). Others have examined the ways Western and especially U.S. national politics have structured global

environmental governance, often to the world's ecological detriment (Ciplet, Roberts, and Khan 2015; Fisher 2004; Gareau 2013; Goldman 1998; McCright and Dunlap 2003). A large and growing literature reveals how interest groups can capture policymaking processes and regulatory bodies at national and international levels to turn the state's machinery toward broadly anti-environmental ends (Brulle 2022; Farrell 2016; Mildener 2020; Oreskes and Conway 2010; Stokes 2020). Few if any, however, provide a robust theorization of environmental states, per se, preferring environment-society relations as the focus of theoretical attention (Fisher and Jorgenson 2019).

5. Alternatively stated, the early history of the developmental state is also the early history of the environmental state. This is an underinvestigated piece of state history central to understanding both the origins of the state's developmental prerogatives, which we do not discuss here (for essential conceptual statements, see Block 2008; Evans 1995), and its growing environmental ones, which we do discuss.
6. See Clemens (2020) for elaboration of this dynamic in the context of state building in general.
7. The cultural resonance of groundwater, or other forms of nature, should not be conflated with the symbolic meaning that sometimes attaches to human activities with environmental effects, like fracking. Boudet et al. (2018), for example, show that in the United States, support for fracking goes inversely with distance from fracking sites. This suggests that fracking itself, separately from the pollution to groundwater it causes, has acquired a cultural meaning that maps onto geographic space in a way that is paradoxically disconnected from material experiences of its effects, that is, polluted groundwater and fracking as an activity have distinct cultural resonances. Jerolmack (2021), Jerolmack and Walker (2018), and Dokshin (2021) help explain this pattern. The broader point remains that environmental politics and environmental concern cannot be reduced to experiences of material harm or economic interests.

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