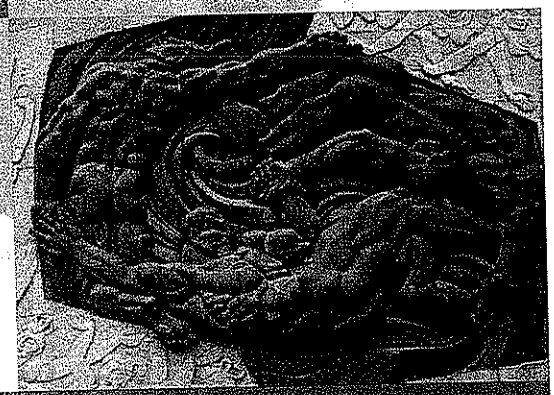
Governing Water

Contentious Transnational Politics and Global Institution Building



Ken Conca

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In memory of John Steinhart—an educator for change

Contents

Series Foreword

A new recognition of profound interconnections between social and natural systems is challenging conventional constructs and the policy predispositions informed by them. Our current intellectual challenge is to develop the analytical and theoretical underpinnings of an understanding of the relationship between the social and the natural systems. Our policy challenge is to identify and implement effective decision-making approaches to managing the global environment.

The series Global Environmental Accord: Strategies for Sustainability and Institutional Innovation adopts an integrated perspective on national, international, cross-border, and cross-jurisdictional problems, priorities, and purposes. It examines the sources and the consequences of social transactions as these relate to environmental conditions and concerns. Our goal is to make a contribution to both intellectual and policy endeavors.

Nazli Choucri

Preface

During the summer of 1999, as I found myself struggling with the ideas that would shape this book, a newspaper article on the last solar eclipse of the millennium caught my attention. An eclipse provides a useful metaphor for how we think about international relations and global ecology early in the twenty-first century. Like those fearful of looking directly at the sun, we avert our gaze from the heart of the problem of global environmental governance. Instead of seeing the problem in truly global terms, we cobble together the intellectual equivalent of a child's cardboard-and-pinhole apparatus. This allows us to see the reflected shape of the problem, projected onto the comfortable viewing surface of sovereign diplomacy. We pretend that the limited instruments at hand, including interstate diplomacy, treaty instruments, and intergovernmental organizations, are up to the task. We allow pollution and environmental degradation to appear on the menu of international problems only when they cross our socially constructed borders or impinge on a euphemistic "commons" such as our climate, which we envision as somehow lying outside those borders.

We avert our gaze because staring directly at the problem would do serious harm to the lenses through which we see the international system on a daily basis. These intellectual lenses encourage us to see a world characterized by the legitimacy of states, the ultimate rationality of governments, and the thin institutionalization of a world system based on a gradually maturing anarchy. To gaze directly at the real world—with states that are often authoritarian in instinct, incompetent in practice, and lacking in collective rationality; and with a world-scale politics that

is deeply institutionalized through the structures of capitalism and the modern project—would be to damage those lenses beyond repair. So, instead, we gaze at an image of interstate environmental diplomacy that we see reflected through the pinhole. Careful scholarship on a few important but limited successes somehow ended up being hammered into a stylized narrative that, for much of the 1990s, created the illusion of progress, while the heart of the problem remained largely unaddressed and out of focus. Useful dissections of the processes of bargaining that produce particular kinds of compliance monitoring systems or technical advisory groups have provided important insights at the microlevel of institutional design. However, we have failed to ask the larger question, and the international environmental community seems to return again and again to the same flawed and ineffective institutional forms.

As I was thinking through the meaning of this astronomical metaphor, I had cause to reread some material that I wrote as a graduate student at Berkeley in the late 1980s. The following passage appeared in a chapter that I contributed to *The State and Social Power in Global Environmental Politics*:

> The patterns of explicit environmental politics reflect a marked tendency toward *re-structuring* (in the sense of reproducing) rather than *restructuring* (in the sense of fundamentally altering) the modern, sovereign, capitalist features of the current world order. International regimes legitimize new regulatory capacities and tasks for states, extending state sovereignty in important new directions. Collective responses consistent with the premises of freely flowing goods and capital are, to say the least, advantaged. And the technocratic, modernist elements within the environmental movement are empowered by their preferential access to the bargaining table. (The *State and Social Power in Global Environmental Politics*, New York: Columbia University Press, 1993, pp. 310–311)

Reconsidering this passage a decade later, it occurred to me that I was now trying to take such reasoning to the next step: documenting newly emerging institutional forms and contrasting them with the prevailing ones that have dominated our attention.

Using water—dynamic, flowing, difficult to contain—to illustrate these ideas reminds me of a book that my children and I have often enjoyed reading together, *The Jade Stone* by Carolyn Yacowitz. The book recounts what is said to be a "traditional Chinese folktale" and begins this way:

> Long ago in China there lived a stone carver named Chan Lo. Chan Lo spent his days carving birds and deer and water buffalo from the colored stones he found near the river. "How do you know what to carve?" his young apprentice asked. "I always listen to the stone," replied Chan Lo. "The stone tells me what it wants to be." (*The Jade Stone*, Holiday House, 1992, p. 3)

I would never claim to be a wise and patient artisan of the sort found so often in children's tales. But I have tried, nonetheless, to listen to the stones I found near the world's rivers.

Acknowledgments

I am grateful to the many people who commented on various parts of the manuscript or discussed with me the ideas behind it, including Rebecca Abers, Sulan Chen, Ken Cousins, Geoffrey Dabelko, Elizabeth DeSombre, Dan Deudney, Navroz Dubash, Sara Glasgow, Peter Gleick, Virginia Haufler, Wanda Haxton, Margaret Keck, Tim Kessler, Richard Matthew, Ron Mitchell, Jacob Park, Jesse Ribot, Frances Seymour, Paul Steinberg, Larry Swatuk, Johannes Stripple, Karen Travis, Anthony Turton, Jan Frederick Valentin, Ivani Vassoler, Paul Wapner, Aaron Wolf, Fengshi Wu, and Oran Young.

I am thankful for the intellectual collaboration of Fengshi Wu and Joanne Neukirchen on a project that provided the bulk of the data and analysis presented in chapter 4. Over the course of preparing the manuscript I benefited from the help of several able research assistants, including Stephen Boyenger, Stephen Grimes, Nick Gurdian, Tina Liu, Serap Rada, Cassie Staley, Kady Waterhouse, and Eleanor Wilson. Support from the Harrison Program on the Future Global Agenda and the Graduate Research Board of the University of Maryland proved invaluable to the writing of this book. Thanks to Clay Morgan and Katherine Almeida of The MIT Press for guiding the manuscript through the process of review and production.

Finally, I am grateful to the many "water people" who were willing to discuss water issues with me along the way, including individuals connected with the Global Water Partnership, the International Rivers Network, the World Commission on Dams, the World Bank and the many water experts, activists, and practitioners with whom I spoke at one time or another in Brazil and South Africa. I did not conduct these

conversations as questionnaire-guided or otherwise formally structured interviews, and although I allude to those conversations occasionally, I have not quoted by name or otherwise cited any of the individuals involved. I think of the various documents, statistics, and scholarly works in the pages that follow as the supportive skeleton and tissue of the argument presented here, and of these conversations as its soul.

Several of the ideas presented here have appeared in preliminary form in other publications. The call for a broader paradigmatic understanding of global environmental governance draws upon ideas I presented as part of an Earth Summit retrospective panel at the 2002 annual meeting of the International Studies Association, later published as "Beyond the Earth Summit Framework" in *Politics and the Life Sciences* (vol. 21 no. 2 September 2002: 53–55). Chapter 4 builds upon data, analysis, and interpretation presented in Ken Conca, Fengshi Wu, and Joanne Neukirchen, "Is There a Global Rivers Regime? Trends in the Principled Content of International River Agreements" (Harrison Program Research Report, College Park: University of Maryland, 2003). An earlier version of chapter 5 appeared as "Growth and Fragmentation in Expert Networks: The Elusive Quest for Integrated Water Resources Management," in Peter Dauvergne, editor, *International Handbook of Environmental Politics* (Cheltenham, UK: Edward Elgar, 2005). I first developed my thinking about the hybridization of authority in an essay entitled "Old States in New Bottles? The Hybridization of Authority in Global Environmental Governance," which became a chapter in John Barry and Robyn Eckersley, eds., *The State and the Global Ecological Crisis* (Cambridge, Mass.: MIT Press, 2005). Some of my ideas about the World Commission on Dams appeared previously in "The World Commission on Dams and Trends in Global Environmental Governance" in *Politics and the Life Sciences* (vol. 21 no. 1 March 2002: 67–70). No doubt a careful reader comparing those texts with this one will find that my thinking has evolved on some points, as it continues to do.

Governing Water

1

Managing the Global Environment or Protecting the Planet's Places? Institutional Forms of Global Environmental Governance

To expose the fundamental norms of a society, often so fundamental as to remain hidden and inarticulated, it was useful to investigate the fate of those who openly violated the norms.

—From the introduction to *The Oxford History of the Prison*

In March 2000, water experts from around the world gathered in The Hague for the Second World Water Forum. The meeting was the brainchild of the World Water Council (WWC), an elite international body established by the World Bank, the UN Development Programme (UNDP), and several international groups representing industry, professional associations, and water policy experts.[1] Held within walking distance of the International Court of Justice, the forum was organized around two reports meant to provide an authoritative frame for addressing global water problems and solutions. The first report, the *World Water Vision*, framed the global water challenge as a case of inadequate supply in the face of greatly increasing demand.[2] Without dramatic technological innovations, institutional change, and substantial new investment, the world in 2025 was projected to face an even more sizable "water gap" than that of today, when an estimated 1.3 billion people lack access to safe drinking water and 2.6 billion lack access to adequate sanitation.

The second report, *World Water Security: A Framework for Action*, presented a blueprint for achieving that vision. The *Framework* called for dramatically expanded investment in water-supply infrastructure, primarily by mobilizing the private sector through incentives such as privatization and full-cost pricing of water. The *Framework* also called

for more effective water governance based on a paradigm of integrated water resources management (IWRM).[3]

Taken together, the *World Water Vision* and the *Framework for Action* offered a model for a global water regime. They put forward a set of norms—prescriptive rules and standards of appropriate behavior meant to govern water-related actions on a global scale.[4] Water management should be based on a holistic approach that links socioeconomic development with environmental protection; water should be valued as a scarce economic resource; an adequate water supply should be seen as a basic human need; transparency and public participation should be the hallmarks of water sector decision making; shared river basins should be governed cooperatively through international agreements. The hope was that as these norms became institutionalized, sovereign governments would improve their domestic practices and strengthen their international partnerships, resulting ultimately in better governance of water. This strategy of articulation, dissemination, and legitimization of norms and incremental institutionalization was not much different from efforts (with highly variable levels of success) to establish something resembling global governance of environmental problems ranging from climate to toxics to protection of the ozone layer.

However, a funny thing happened on the way to the World Water Forum. During the opening plenary session, as World Water Council President Mahmoud Abu-Zeid prepared to address the conferees, hecklers began jeering from the audience. A naked man and woman leaped onto the stage, shouting "Stop the Itoiz Dam." A protestor hung from the balcony with a large banner; another began scaling the wall of the conference hall. Chaos reigned for several minutes, with Abu-Zeid effectively blocked from speaking as security forces struggled to remove the protesters. The crown prince of the Netherlands, honorary chairman of the forum, took the stage and politely rebuked those causing the disruption, accusing them of lacking civility. The specific focus of the protest was a controversial dam project in the Basque region of Spain. More generally, the demonstrators were challenging what they saw as the forum's underlying bias toward capital-intensive, supply-side measures and technocratic, nonparticipatory decision making.

Calm was eventually restored, and the forum proceeded more or less as planned over the next several days. Panels were held on water economics, pollution control, national water law reform, dam projects, and a host of other issues. Representatives of so-called major groups, including nongovernmental organizations (NGOs), women, youth, scientists, and industry, met to ratify mostly prewritten comments on the *World Water Vision* and the *Framework for Action*. A simultaneous ministerial conference endorsed both documents. Forum participants left The Hague with baseball caps bearing the forum's logo and website address. The official report on the forum and ministerial conference made no mention of the disruptive incident or other expressions of dissent throughout the meeting.

One motive for writing this book is to examine the stark disconnect between the forum's blueprint for forging a global water regime and the contentious politics surrounding water all around the world. As the protestors showed, and as much of the discussion at the forum underscored, the model presented in the forum's glossy documents has little hope of forging consensus or even containing the controversies that swirl around water issues. The *Vision* asserted that governments, as sovereign and legitimate decision-making bodies, are the key actors, thereby ignoring the central reality that authority is fundamentally contested in the domain of water. Whose water is it? Who should have the legitimate power to decide? What does it mean to describe governments as sovereign and legitimate while also calling for virtually all of the new investment in global water supply to come from the private sector?[5] What is the relationship between authority in a watershed, authority in a boardroom, and authority in a nation-state? Generalizations about the need to involve stakeholders barely hint at the contested character of authority relations surrounding water. Yet without confronting these contestations, what hope is there for a cooperative and broadly legitimate approach to governance of water?

Similarly, both the *Vision* and the *Framework* glossed over the central reality of radically different constructions of knowledge—of the facts, causal mechanisms, and larger truths about the world's water problems, their sources, and their solutions. As pointed out by the Indian publication *Hindu*,

> If the organizers of the meet, which has brought together over 3,500 people from 158 countries, had hoped for orderly discussions on a range of issues revolving around water use and management, they had clearly underestimated the strength of sentiments on this issue in many parts of the world.... While the doomsdayers, who included a group that has raised an alarm about the availability of water and the water gap, want to stress issues like water management, the non-governmental groups are more concerned about issues such as privatization of water, and the systems of water management, like large dams, which have adverse impacts on people and the environment. The International Rivers Network states in its critique that the real crisis is one of over-consumption, waste, pollution, watershed degradation, rampant dam-building, poorly-conceived and operated infrastructure projects, corruption and inequality.[6]

That this observation appeared in *Hindu* is fitting, because nothing illustrated the contrasting constructions of the problem more sharply than the way in which India's water issues were injected into the global discussion. The Indian government, worried about international criticism of its dam-building enterprises, sent a large official delegation to launch a counteroffensive, framing the problem as one of building water infrastructure in order to combat poverty. Others from India carried a dramatically different message: anti-dam activists, environmentalists, and grassroots development groups also came to The Hague in force, decrying the human and ecological toll of the government's understanding of the problem. Powerful multinational industrial groups formed a third pole in this complex struggle to define the problem; they were supportive of the Indian government's capital-intensive, supply-oriented vision, but wary of its statist instincts in the water sector. Rather than acknowledge these radically different understandings and views, the *Framework for Action* offered only a depoliticized notion of integrated water resources management, which it described as holistic, comprehensive, and knowledge-based—and thus, by implication, unobjectionable.

We seem, therefore, to be at an impasse. Attempts to create a broadly cooperative international approach to managing water—to govern water globally, so to speak—seem doomed to founder on more fundamentally contested questions. Should it be the privatized, supply-oriented vision of the forum? Or the grassroots, watershed-scale vision of the forum's most ardent critics? Or an updated version of the state-led model of infrastructure expansion and water as a public good that so many governments have historically favored?

This impasse is not unlike the fate of the effort to forge a regime for world forests. The forest talks collapsed at the 1992 Rio de Janeiro Earth Summit, and an array of ineffective commissions and draft agreements in the ensuing decade did nothing to revive them. As with many other festering socioenvironmental problems, it has not been possible to hold either water or forest issues within the standard institutional vessel of sovereign, authoritative governments, fixed and meaningful borders, and unambiguous knowledge-based truths.

However, the failure to build a global water regime is only half of the story. The world's water is indeed subject to deeply and increasingly transnational forms of governance. We have been witnessing the development, proliferation, and growing embeddedness of rules, roles, and practices that shape water-related policy decisions and political struggles all over the world. The World Water Council is but one reflection of this process of institution building; so too are the many commissions, international lobby groups, and intergovernmental organizations that came together to create the council. Other manifestations include entities as diverse as the Global Water Partnership (GWP), a coordinating group for donors providing water sector development assistance; the World Commission on Dams, a mixed-membership international panel representing various stakeholder interests and seeking common ground on the controversies surrounding large dams; and International Rivers Network (IRN), a transnational nongovernmental activist network that coordinates and supports the struggles of local groups affected by large dams and other projects that tamper with the natural flow of the world's rivers. The net effect of this panoply of increasingly embedded roles and rules is not a neat, uncontested set of water norms of the sort proffered by the *World Water Vision*, but the result, nevertheless, is a form of (global governance.) Water-related struggles are being bounded, channeled, regularized, and normalized, with tangible consequences for the behavior of national governments and other actors. If global governance consists of governing acts that have a broadly international reach, and if those acts include such things as the framing of policy, the setting of standards, and the mobilization and allocation of resources, then water is indeed subject to governance that is increasingly, though certainly not exclusively, global.[7]

This book is about struggles to establish rules of global environmental governance under the highly conflictual circumstances that surround water. The goal is not to deepen our understanding of the handful of global-scale environmental problems that have attracted most of the attention and most of the international institution-building energy: climate change, damage to the ozone layer, pollution of the world's oceans, or international trafficking in hazardous waste or endangered species. Rather, my concern is to understand the politics of global institution building around local ecological systems that are found all around the planet—forests, soils, grasslands, wetlands, tundras, deserts, rivers, lakes, and coastlines. These systems share a triple meaning: they are critical ecosystems with both local and global significance; they are important sources of community livelihoods and cultural meaning for millions of people; and, in an increasingly global world economy, they are marketable international commodities, either as natural resource goods or ecotourist services. They also share a common problem. According to a mounting body of evidence, the global response to the cumulative ecological toll on these local systems has been woefully inadequate. I will argue that the threats to these systems are indeed "global" problems demanding "global" governance—even if their global character lies hidden behind the façade of sovereignty or our ignorance of the global consequences of millions of local insults.

A major reason for the inadequacy of the global response is that it has, for the most part, insisted on reproducing a particular institutional form: the negotiated international agreements among sovereign states that are commonly known as international regimes. Such agreements are meant to draw sovereign governments into cooperative action by creating a consensual understanding of a particular environmental problem and by fostering new norms of behavior that will correct the problem. Regimes typically involve stages of cooperative multilateral bargaining, framework agreements that are given greater depth of meaning and specificity over time, and international secretariats to encourage implementation and compliance. Regimes have been developed, with varying degrees of success, around a growing number of transboundary pollution problems such as acid rain or cross-border river pollution; they have also been created in response to problems of the global commons, such as depletion of the ozone layer, ocean pollution, or global climate change.

However, the regime approach has made little headway on more local environmental problems that take a cumulative toll on the health of the planet and its people. Grounded as they are in international law, modern science, and bureaucratic administration, regime-building efforts tend to ignore, paper over, or further polarize the deeply rooted conflicts about authority, territory, and knowledge that characterize this class of environmental problems. The result, too often, is an agreement fated to die on the negotiating table, prove ineffective, or make the problem worse. Sometimes the failure is spectacular, as in the aborted attempt to negotiate a regime for world forests at the 1992 Earth Summit. In other cases, as with the world's freshwater resources, it is the less noted but more fundamental failure to get a serious regime-building effort launched in the first place.

Against this pessimistic view I will balance a growing conviction based on several years spent studying the politics of local but globally cumulative environmental problems. Beyond the familiar blueprint of the international environmental regime lies a plethora of institutional forms that do in fact constitute the global governance of these problems. Unlike most conventional international environmental regimes, these emerging institutions have found a way to incorporate more pluralistic understandings of authority, more flexible conceptions of territorial sovereignty, and more heterogeneous ways of knowing about problems and solutions. Certainly we can imagine such institutional forms, however difficult the political struggle to bring them into being might be. To help with the process of imagining, chapter 2 presents a framework for imagining institutional forms that lie beyond conventional regimes, by treating key institutional orientations related to authority, territoriality, and knowledge as variables rather than constants. The argument is more ambitious than merely showing the imaginability of alternative institutional forms that lie beyond regimes. I will suggest that we can already see new institutional forms emerging and shaping water-related behavior on a broad and expanding scale. Although they are largely informal, the emerging sets of rules and norms described in this book are becoming

increasingly embedded in the political fabric of water struggles all around the planet. Seeing them, however, requires us to step outside the box of the regime paradigm, with its specific formulations about governmental authority, sovereign territory, and universal scientific knowledge.

Stepping outside that box requires two shifts of focus. The first is to look away from those environmental problems that fit the regime box most neatly. Problems relatively amenable to the regime approach, I will argue, include global commons issues such as climate, the oceans, and the ozone layer, as well as transboundary flow problems such as hazardous waste shipments or regional airsheds. Rather, the focus here is on the more hidden, creeping, incremental, and cumulative dimensions of the assault on the global environment. This distinction among types of environmental challenges will be described in terms of conflicting paradigms, one of governing pollution beyond borders, the other of protecting the planet's places. Conventional regimes may or may not respond effectively to the problem of pollution beyond borders, but they have been largely powerless in protecting the planet's places.

To illustrate both the limits of the regime approach and the emergence of other institutional forms of environmental governance, I will focus centrally on water, rivers, and watersheds. Water is emblematic of the triple meaning of critical ecosystem, local livelihood and culture, and market commodity. It is also a prototypical example of the resulting social controversies and political contentiousness that surround this category of issues. Governance of water involves enduring, chronic, and sometimes raging controversies about local practices of resource management, conservation, and environmental protection in an increasingly transnational context. As such, water is illustrative of a whole array of socioecological controversies that we can think of under the rubric of contentious transnational environmental politics (figure 1.1).

The second necessary shift is to move the focus away from the substantive content of environmental cooperation and toward the procedural aspects of socioenvironmental conflict. The challenge in protecting the planet's places is not simply to find institutionalized rules about what constitutes proper treatment of the environment but also to find rules that contain or channel deeply divisive, contentious debates when a broad consensus on substance may be unattainable. Therefore my analysis does not center on a conventionally framed environmental issue such acid rain or ocean pollution. In these cases, a relatively stable construction of the problem hints that some degree of closure has been achieved (through bargaining, consensus, or imposition of rules) on the deeper questions of authority, territoriality, and knowledge that are my central concern. Again, water provides a powerful example. As discussed in subsequent chapters, water has not been an area of extensive or effective governance through the conventional institutional form of one or more international regimes. When it comes to water, persuasive formulations or plausible fictions about competent state authority; fixed and bordered territory; and unambiguous, universal knowledge cannot be sustained. The question is whether other institutional forms, responsive to the increasingly transnational challenges of environmental governance, can emerge where regimes have failed to take root.

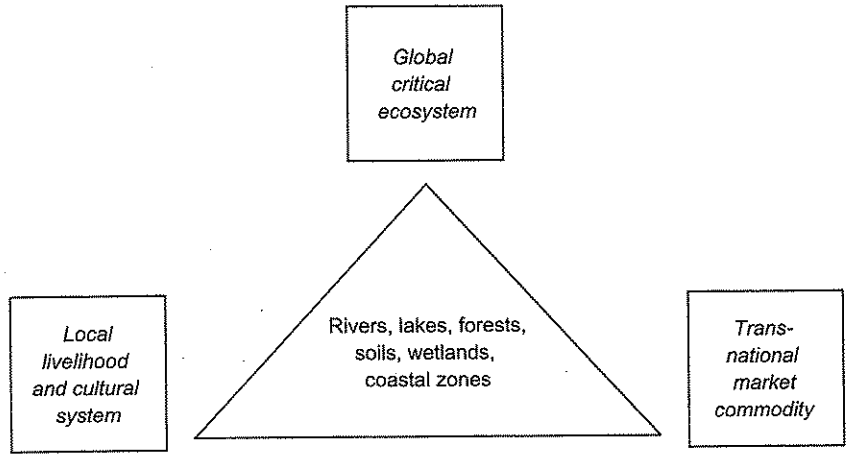

Figure 1.1
Contentious transnational environmental politics.

Regimes as the Grand Strategy of Global Environmental Governance

The past few decades have seen an unprecedented flurry of international activity on global environmental problems. Treaties have been negotiated and ratified on a host of environmental ills. Principles of sustainability

have been articulated and debated. The World Bank and other multilateral organizations have come under intense pressure to take environmental considerations seriously. Transnational environmental advocacy networks, linking countless citizens' organizations and protest groups, have emerged as a force with which governments and corporations must reckon. These diverse activities have been highly variable in effectiveness, have faced strong opposition and, often, have been poorly coordinated. Nevertheless, they have woven at least the beginnings of a fabric of global environmental governance.

Much of this activity has been based on a straightforward premise: Global environmental problems result from the poor fit between national borders and a planetary ecology that ignores those borders. Ecosystems straddle borders, and natural cycles are constantly producing transboundary flows of water, energy, nutrients, and pollutants. As a result, the global environment is often described as Garrett Hardin's tragedy of the commons writ large, in the sense that even the best efforts by individual countries to protect the environment can be overwhelmed by the failings of others, upstream or upwind, to do so. In the words of the Brundtland Commission, "The Earth is one but the world is not."[8] By this logic, if environmental protection is to be effective, it must be international, indeed global, in its conception, scope, and implementation.[9]

Given all the well-known barriers to international cooperation, how is this daunting challenge of international collective action to be accomplished? The standard prescription is for governments to sit down at the bargaining table and negotiate multilateral agreements on specific problems such as global warming, damage to the stratospheric ozone layer, ocean dumping, trafficking in hazardous waste, or destruction of the world's forests. Typically, the goal of these negotiations is to create a formal agreement to be signed and then ratified by individual states, such as the Framework Convention on Climate Change, the Montreal Protocol on Substances that Deplete the Ozone Layer, the International Tropical Timber Agreement, or the Convention on Biological Diversity. Some of the "rules" that these agreements create take the form of general principles: that the polluter should pay, that uncertainty demands caution, or that sovereign rights entail environmental responsibilities. Other rules are much more specific: defining what may or may not be shipped, burned, extracted, dumped, harvested, or manufactured; identifying what governments must monitor, enforce, fund, or report; or establishing how specific grievances or disputes are to be addressed.[10]

Skeptics note that such international rules are rarely enforceable in a strictly legal sense. The standard response to this concern is that what matters is not the legal instrument per se but rather the institutionalization around that legal instrument of a bundle of common understandings, shared expectations, and cooperative norms. These, it is hoped, will shape behavior through subtler channels than formal, legalistic enforcement procedures. In other words, the strategy is to create not just an international treaty but rather an international regime, a set of agreed-upon "rules of the game" that will yield convergent expectations, normative prescriptions, information flows, and institutionalized relationships that move governments toward compliance with the agreement's major aims.[11] Regimes are thus instruments of governance without government; they promote rule-conforming behavior in an international system marked by the absence of centralized governmental authority.

Scholars have identified and documented several ways that regimes may affect behavior.[12] Governments may recalculate national interests in the light of new knowledge that is created in the process of developing the regime's rules. Behavior may change once governments have different expectations about what others will do or when actions become more transparent through monitoring and reporting requirements. Managerial and administrative capacity may be enhanced through international exchange. Bureaucracies and interest groups that favor the regime's aims may be strengthened in their domestic political struggles once authoritative international principles have been articulated. Advocates inside and outside the state can pressure governments to honor the rhetorical commitments they have made through an international agreement. Governments or other actors may be socialized by transnationally diffused norms. As compliance with rules becomes the norm, reputations may be tarnished by noncompliance.

A wide array of liberal internationalists in government, academia, international organizations, environmental groups, and the media have embraced this particular logic of global environmental governance. Spurred on by these advocates, the regime-building approach has become

the centerpiece of responses to problems as diverse as trafficking in endangered species, desertification, the loss of biodiversity, and degradation of the fragile Antarctic environment. The dominance of the regime approach becomes apparent when new environmental problems are identified. Advocates now move quickly and seamlessly from sounding the warning to launching the effort to build a new interstate regulatory regime, as seen in areas ranging from persistent organic pollutants (POPs) to invasions of alien plant and animal species. Even unprecedentedly complex, multifaceted global problems such as climate change and loss of biodiversity are assumed to be suitable for the creation of international regimes. Three decades after the seminal 1972 UN Conference on the Human Environment, it is no exaggeration to say that regime building has become the grand strategy of global environmental protection.

Is the regime approach working? Undoubtedly, several important international agreements have been concluded, such as the Montreal Protocol on Substances that Deplete the Ozone Layer, the Convention on International Trade in Endangered Species (CITES), and various regional agreements to protect enclosed seas, combat acid rain, or preserve the Antarctic environment. Although few environmental advocates would describe any of these agreements as perfect, even fewer would care to imagine the scope of the problem in their absence. Nevertheless, the failings of the regime approach are at least as noteworthy as the handful of alleged successes. In many cases it has proven impossible to push governments to make the necessary commitment or even to start the bargaining process. There are no significant regime-building initiatives to speak of on such pressing problems as the destabilization of critical global nutrient cycles, the global decline of plant pollinators, the protection of freshwater ecosystems, or the manufacture of hazardous materials.

Also, proponents and skeptics alike acknowledge that many existing environmental accords have had little or no demonstrable impact on environmental quality.[13] Although formal international agreements are central to most regime-building strategies, the mere act of reaching such an agreement does not guarantee the dynamic process of institutionalized cooperation, convergent behavior, and shared expectations envisioned by regime builders. The Ramsar accord on "wetlands of international importance," for example, has had little measurable impact in slowing the global assault on wetlands; nor can it be said to be the catalyst for a broader process of rule making, convergence of norms, and behavioral change. Desertification provides another example of regime failure. Despite more than two decades of effort to galvanize international action on the spread of deserts and related problems of land conversion, governments have made only a weak, vague set of commitments that can scarcely be called a regime. The 1994 United Nations Convention to Combat Desertification called for more attention to the problem, unspecified national action plans, more international aid, and better aid coordination—all themes that were on the table at the UN Conference on Desertification almost two decades earlier.[14] The biodiversity convention signed with such fanfare at the 1992 Earth Summit has also faltered, a victim of its own vagueness on the conservation obligations of states and the choice of its framers to dodge the tensions between genetic material as an economic resource and biodiversity as community-based common property.[15] Often, the hope of regime builders is that vague, nonbinding, or otherwise weak agreements can set in motion a gradual process of deepening cooperation and strengthening of rules. However, the failure of this model in the wetlands, desertification, and biodiversity accords reminds us that the slope of international environmental cooperation is not always slippery.

The absence of regimes for many pressing problems and the inability of many formal agreements to produce meaningful regimes does not invalidate the regime approach; the task may simply be incomplete. Yet even if it can be ultimately effective, the regime approach suffers from an inherent limitation: the narrowly skewed subset of environmental problems around which regimes are most likely to form. Most of the problems that have attracted serious, sustained regime-building efforts involve environmental harm that flows directly across borders. Regimes are commonly formed around specific cross-border flows from point A to point B, such as acid rain, water pollution in shared river basins, or cross-border shipments of hazardous waste. Formation of a regime has also been a common remedy for problems associated with an international commons that exists outside the territory of states, such as a regional sea, the world's oceans, or the global atmosphere. What these two

clusters of problems share is that they involve a direct physical, chemical, or biological effect that extends beyond borders.

What happens when we turn our attention from the problem of pollution across borders to the ecological health of the millions of particular locales that lie within those borders? What if the heart of our global environmental problem is the failure to respond to the system-wide pressures and cumulative effects on the world's myriad forests, deserts, grasslands, meadows, soils, wetlands, lakes, rivers, and watersheds? Here, the regime approach has alternated between silence and failure. These physically local systems tend to be "governed" by international regimes only when they are tied to a particularly obvious, immediate, and physically tangible transnational effect, as might occur when they happen to straddle a border.

This narrow, border-reinforcing view of our planetary predicament dominated the 1992 Earth Summit, which was probably the high-water mark for interstate environmental cooperation. High-profile problems surrounding the global commons of climate and biodiversity were subjected to intense, sustained efforts to form regimes, resulting in a treaty on biological diversity and a framework convention on climate change. However, when it came to the equally daunting array of local, incremental, cumulative environmental challenges, regime formation either stalled in the face of political controversy or was not even attempted. Talks on a forest regime collapsed in acrimony, and most of the planet's local, accumulating ecological problems were not subject to regime-building efforts at all. Instead, they were relegated to a set of loose, nonbinding, and largely rhetorical commitments clustered under the rubric of Agenda 21. They were to be dealt with later, voluntarily, and by individual states, if they were to be dealt with at all.

The failure of the regime approach to grapple with the local, cumulative dimensions of the planet's ecological health is deeply troubling when one considers some facts about these "local" environmental problems:

Forests According to the Food and Agriculture Organization (FAO) of the United Nations, the world suffered a net loss of roughly 180 million hectares of forest between 1980 and 1995, an area roughly the size of Mexico.[16] Forest degradation is proceeding even more rapidly than the loss of forest cover, as forest plantations and intensively logged landscapes make up an increasing share of the world's so-called forests.

Soils The World Resources Institute (WRI) reports that by 1990, poor agricultural practices had led directly to the degradation of 562 million hectares of cropland, or about 38 percent of the world's total cropland. It is estimated that losses as a result of severe soil degradation are occurring at the rate of an additional 5 to 6 million hectares annually—an area larger than Serbia, Bosnia, or Croatia.[17] It has been estimated that soil degradation has resulted in a 13 percent loss in productivity for the world's croplands over the past 50 years.[18]

Freshwater ecosystems Of the more than one-third of the world's species of fish that are endangered, most live in freshwater ecosystems. The assault on freshwater ecosystems comes from a variety of sources, including water diversion, industrial discharge, agricultural and urban runoff, overfishing, siltation, and bioinvasions. Damming and other water-diversion schemes have taken an enormous toll. Estimates suggest that there may be as many as 800,000 dams on the world's rivers, including about 40,000 of what are generally referred to as "large dams" and more than 300 giants such as Hoover, Itaipu, Aswan, and Three Gorges. During the twentieth century, the number of large dams increased roughly eightfold while the number of waterways altered for navigation increased from fewer than 9,000 to almost 500,000.[19]

Drylands According to the United Nations Environment Programme (UNEP), 70 percent of the world's drylands are degraded, meaning that they have suffered a loss of economic or biological productivity and complexity. More than 250 million people are directly affected by desertification and an additional 1 billion or more are at risk.[20]

Coral reefs A 1998 assessment by the World Resources Institute concluded that 58 percent of the world's coral reefs were at risk from human activity, with 27 percent at high or very high risk. Overfishing and coastal development were identified as the largest threats. Although comprehensive data on reef degradation do not exist, one reef ecologist estimated that by the early 1990s, 10 percent of the world's reefs were already severely degraded and that the figure would jump to 30 percent within two decades.[21]

Similarly depressing sketches could be drawn for the world's grasslands, coastlines, fisheries, or wetlands. In large part because of these globally accumulating "local" problems, the UN Environment Programme's *Global Environmental Outlook* report observed on the tenth anniversary of the Earth Summit in 2002 that

> The environment is still at the periphery of socio-economic development. Poverty and excessive consumption ... continue to put enormous pressure on the environment. The unfortunate result is that sustainable development remains largely theoretical for the majority of the world's population of more than 6000 million people. The level of awareness and action has not been commensurate with the state of the global environment today; it continues to deteriorate.[22]

It may be tempting to think of the destruction of wetlands, the erosion of soils, the abuse of watersheds, and the ravaging of coastlines as local environmental problems. They typically manifest themselves over spatially limited areas, and only occasionally will those manifestations occur just upwind or downstream of a nation's border. In narrowly physical terms, these problems are global only in the cumulative sense that they are happening all over the planet.[23]

However, if we think of the natural world not only as a spatial distribution of locales but also as a set of life-supporting natural cycles and ecosystem services, the genuinely global dimension of local ecosystem health becomes apparent. An extreme version of this view is the so-called Gaia hypothesis, which posits the Earth as an integrated, lifelike system making self-correcting adjustments to stresses in its component systems.[24] One need not leap all the way to Gaia to see the globally linked dimensions of local ecosystems; such links are apparent in the way that local interventions add up to global-scale perturbations of nutrient cycles. For carbon, nitrogen, phosphorus, and other key nutrients, the amount introduced or displaced by human activity now approaches or even exceeds some of the critical natural flows in the global cycle. For example, fertilizer use, fossil fuel combustion, and land clearing have grown to the point that the amount of human-generated nitrogen available for plant uptake (some 210 million tons annually) exceeds the background natural supply (an estimated 140 million metric tons per year).[25]

Another important global dimension to local environmental degradation comes from the growing social interconnectedness of the world system. Our physically and biologically integrated world is fragmented by political division into sovereign states, but it is also constantly being reassembled by massive, rapid flows of people, goods, money, ideas, images, and technology across increasingly porous borders. These flows produce a dense, socially constructed web that can transmit the causes and effects of seemingly local environmental problems from one place to another just as surely as a river or a rainstorm might carry them.[26] These transnational linkages are at times more subtle than cross-border flows of acid rain, toxic waste, or animal pelts, making their global interconnectedness less readily apparent than that of the oceans, atmosphere, or ozone layer, but no less real.

Consider the problem of soil degradation (a catchall concept that includes erosion, salinization, compaction, nutrient depletion, and other negative impacts on soils). In globally cumulative terms, the problem is immense, encompassing more than a third of the world's croplands. This constitutes an enormous global squandering of natural capital. One effort to value ecosystem services placed the economic value of soil formation processes at $53 billion annually, a figure roughly equal to the annual world total of foreign aid.[27] Yet in purely physical terms, soil degradation manifests itself on the local scale of specific watersheds and landscapes. The primary culprits are the use and abuse of agricultural practices such as irrigation, mechanical tilling, intensive cropping, and modern agrochemicals. From the vantage point of sovereign international cooperation, the problem is a local one unless a specific site of intense erosion happens to straddle a specific border. There may be a perceived role for international aid or outside expertise in addressing such problems. However, only rarely does this sort of construction of the problem lead to a broader regime-building process, replete with convergent norms, the articulation of sovereign responsibilities, the legal codification of cooperative means and ends, and international standard setting.

The tendency to view this problem as a local one ignores the powerful transnational economic, political, and social forces that contribute directly to soil degradation.[28] Damaging practices are often the result of cash-crop production, driven by the lure of international markets, pressures to boost exports, the need to service external debt, or the preferences

of international development agencies. As with the causes, the social effects of soil degradation also transcend the local. According to one estimate, between 1945 and 1990 soil degradation reduced potential world food production by roughly 17 percent, putting upward pressure on world food prices and exacerbating national- and regional-scale food insecurity.[29] Threatened livelihoods and undermined communities can also generate border-crossing environmental refugees. These effects are felt far from the point of soil degradation, and they can be transmitted much farther and faster than any direct physical consequences. Without a broadly international response, efforts to deal with the transnational drivers of the problem are overwhelmed by pressures for global economic competitiveness or negated by international trading rules that challenge local environmental laws as restraints on trade. Efforts to treat the transnationally disseminated consequences suffer a similar fate.

Rivers, and the freshwater ecosystems that they anchor, provide a particularly important and compelling example of the tight social connections of the global environment. Once again, both the drivers and the cumulative consequences of damming, draining, diverting, and dumping in the world's river basins move through deeply embedded transnational channels. The financing and technical expertise to "push rivers around" has long been transnational. While the environmental consequences are felt most directly and immediately on the more local scale of an individual watershed, they also accumulate to produce genuinely global effects: rapid declines in freshwater biodiversity, destruction of critical wetlands and floodplain ecosystems, and an extraordinary degree of human intervention in the global water cycle (tapping more than half of the accessible global runoff).

The genuinely global ramifications of growing socioecological interconnectedness are potentially enormous. One not-so-subtle hint is provided in an effort by a group of leading ecological economists to estimate the value of global ecosystem services (table 1.1). There are, of course, large uncertainties involved in generating such estimates. Indeed, one may quarrel with the idea of assigning economic value in the absence of price-setting markets for these services. What remains indisputable is the vast social utility of these critical natural regulatory processes and cycles, and thus the potentially enormous economic dislocations resulting

Table 1.1
Estimated value of the world's ecosystem services and natural capital (billion 1994 US$ per year)

By Type of Service		By Biome Type	
Gas regulation	1,341	Open ocean	8,381
Climate regulation	684	Coastal marine	12,568
Disturbance regulation	1,779	Tropical forest	3,813
Water regulation	1,115	Temperate and boreal forest	894
Water supply	1,692		
Erosion control	576	Grass and rangelands	906
Soil formation	53	Wetlands	4,879
Nutrient cycling	17,075	Lakes and rivers	1,700
Waste treatment	2,277	Desert	n.a.
Pollination	117	Tundra	n.a.
Biological control	417	Ice and rock	n.a.
Habitat or refugia	124	Cropland	128
Food production	1,386	Urban	—
Raw materials	721		
Genetic resources	79		
Recreation	815		
Cultural	3,015		
Total global value	33,268	Total global value	33,268

Notes: n.a. = not available; — = negligible. Columns may not add, owing to rounding.
Source: Costanza et al. 1997.

from their disruption. Yet these services depend integrally on the health of local ecosystems, which are themselves suffering under the cumulative toll of millions of insults. The critical ecosystems of wetlands, tropical forests, and coastal marine environments—among the most besieged of the planet's places—accounted for almost two-thirds of the estimated service value of ecosystems cited in table 1.1.

In other words, local environmental problems have profoundly global implications through their cumulative impact on key global systems and cycles and their increasingly far-flung reverberations across a densely interconnected social world. This means that the challenge of global environmental governance is not simply one of managing the spaces outside state boundaries or limiting the spillover of pollutants across those

boundaries. Rather, as Wendell Berry explains it, "The question that *must* be addressed ... is not how to care for the planet, but how to care for each of the planet's millions of human and natural neighborhoods."[30] The challenge is to deal with the accumulating impact on local ecosystems in a world where political, economic, cultural, and informational borders have been obliterated more quickly than strictly ecological ones.

The failure to account for the socially transnational character of the planet's places may help to explain why the regime approach has faltered in an era of globalization. It has not fared well in the context of globalization, even for those conventional international issues where regime formation has been possible. The Basel Convention, which first sought to control and then to ban outright the shipment of hazardous wastes to developing countries, has been weakened by the threat of a challenge through the World Trade Organization (WTO).[31] A similar threat confronts the stratospheric ozone regime; its restrictions on trade with nonparties, a key element of the regime, are of questionable validity in the view of the General Agreement on Tariffs and Trade (GATT) and the WTO.[32] It is difficult to imagine the conclusion today of an agreement such as the 1973 Convention on International Trade in Endangered Species, which deliberately delegitimizes a lucrative form of international trade. Indeed, in the current global economic climate, rules on trade, investment, foreign aid, or intellectual property have become much more fundamental institutions of global governance than any international environmental regime. The idea of weaving the fabric of global governance one regime strand at a time is confronted with the harsh reality that deeply institutionalized practices of trade liberalization, development assistance, and capital mobility already constitute a preexisting and tightly woven fabric in the world political economy.[33]

Regimes as Extremes

Why is the regime approach so often silent or ineffective in addressing this broad class of environmental threats? I will argue that it is because most environmental regimes and the regime concept in general are founded on highly stylized notions about territory, authority, and knowledge. Not all of the social struggles that swirl around environmental problems can be resolved by cramming the problem into the institutional mold offered by the regime approach. Many physically local but globally cumulative problems have been particularly poor fits.

One of the strong, indeed extreme, presumptions of the regime approach can be seen in the need to argue that "local" environmental problems are appropriate subjects in a discussion of "global" environmental governance. The regime approach internalizes a narrowly territorial notion of what constitutes an "international" problem. It stresses the transnational character of certain physical systems, but not the transnational character of economic, social, and political institutions. This means that creeping, incremental, local manifestations of the planetary predicament are relegated to the domestic sphere. This problem is not limited to the environmental realm, of course; it also plagues efforts to manage the increasingly global macroeconomy, to respond to problems of violent intergroup conflict within nominally sovereign nations, or to prevent the spread of disease. In each case, the fiction of neatly separable "domestic" and "international" realms produces limited responses to problems with causes and consequences that flow through increasingly porous borders.

The problem runs deeper than just the territorial underpinnings of the regime concept. A second limit of the regime approach involves its position toward questions of authority, legitimacy, and role definitions in the process of governance. Simply put, regimes are the vehicles of states. Because a codified international agreement lies at the heart of most processes of regime building, regimes internalize strong presumptions about state authority, the legitimacy of state actions, and the essential difference between governments and other collective agents. As a result, the regime approach embodies strong and rigid presumptions about who governs whom. Many regimes do allow roles for nonstate actors; a few even give (selected) nonstate actors substantial standing and voice. However, rarely do these roles challenge the core presumption of state authority. Consider *Our Common Future*, the highly influential report of the World Commission on Environment and Development and the inspiration for the 1992 Earth Summit. An appendix to the report recommends twenty-three principles for environmental protection and sustainable development. After an initial principle defining the individual's right to

a sound environment, the remaining twenty-two principles each begin with the same phrase: "States shall . . .".[34]

This presumption of state authority comes at a high cost. Problems over which states lack the uncontested, legitimate authority to govern are not likely to yield effective regimes. It is telling that struggles over authority and challenges to state legitimacy are often the essence of the politics that surrounds the local, cumulative dimensions of global environmental change. The conflicts that arise in the effort to control people and nature in these cases make it impossible to create institutions based on authoritative states whose governing acts are clothed in broadly based legitimacy. In other words, these problems lie beyond the regime approach not only because they are spatially "domestic," but also because they involve hotly and explicitly contested struggles over authority. As discussed in chapter 2, increasingly common invocations of "stakeholder participation" barely hint at the scope of the question of authority.

Along with territory and authority, the third key pillar of the regime approach is its stance toward knowledge. The regime approach gravitates toward issue areas constructed by an authoritative understanding of both problem and solution. One of the biggest challenges facing regime builders is to create a foundation of officially sanctioned knowledge. Simply put, regimes demand a definitive outcome to the struggles over knowledge that are inherent to environmental politics. A resolution may be attained by consensual negotiation or hegemonic imposition, but without it, regime formation becomes problematic. Despite the desire of environmentalists to elevate the "precautionary principle" to the status of an international norm, regimes tend not to form when the understandings of a problem and its solution remain highly contested for an indefinite period. As I will argue in chapter 2, for a wide array of the planet's local, cumulative environmental problems there is no neat closure on knowledge and probably it is not possible, making regime-based governance problematic.

Combining these presumptions about territoriality, authority, and knowledge, regimes can be understood as high-modern expressions of the same bordered, statist, functional-rational worldview that yielded the institutional monoculture of the Westphalian international interstate system. These presumptions have allowed a modicum of progress on

certain important environmental problems that involve pollution beyond borders. Even those gains now face growing tensions between their regime-based institutional foundation and the precepts of economic globalization. When confronted with the more fundamental problem of protecting the planet's places, replete with its struggles over bordered enclosure, governing authority, and the validity of knowledge, the regime approach leaves us with unpalatable choices: to deny the existence of those struggles, to seek to impose neat resolutions upon them, or to founder in the face of their depth and complexity.

Institutionalizing the Nonstate?

What happens, then, when international regimes are infeasible, undesirable, or unimaginable? Are there other institutional forms, either existing or conceivable, on which to build responses to the pressures on the planet's places? If the limitation of the regime approach is a tightly circumscribed attitude toward territorially delineated sovereignty, state authority, and official knowledge, then one obvious place to turn for alternatives are entities that are not states—the rich array of networks, coalitions, grassroots activism, and transnational campaigns created by a global panoply of citizens' organizations, activist groups, and social movements. Might these agents and processes be creating alternative mechanisms of global environmental governance that can circumvent the limits of the regime approach?

The answer is difficult to gauge, in part because scholars have taken many different approaches to understanding the diverse array of actors, campaigns, and ideas that constitute the nonstate. Some conceptualize transnational nonstate processes in terms of networks of well-positioned individuals or small groups wielding forms of knowledge power. Haas, for example, identifies networks of technical experts functioning as "epistemic communities" that use the power of technical expertise to move governments toward cooperation.[35] Litfin examines the role of the "knowledge entrepreneurs" who frame understandings of international environmental problems in ways that either hinder or facilitate cooperation.[36] Although these approaches differ in their view of what constitutes knowledge and of who has the power to legitimize it, they

share an emphasis on the nonstate dimensions of power in the form of the political construction and use of technical expertise.

Another way to capture the nonstate emphasizes the power of its explicit values; Keck and Sikkink identify ("transnational advocacy networks") made up of value-driven activists both inside and outside the state, linked by "shared values, a common discourse, and dense exchanges of information and services."[37] These networks exploit information, symbols, and powerful discursive frames of injustice to hold governments accountable transnationally. Yet another approach stresses the organizational foundation of the nonstate. Wapner, for example, identifies transnational environmental organizations such as Greenpeace, Friends of the Earth, and the Worldwide Fund for Nature as the pillars of an emergent global civil society, disseminating new ideas, practices, values, sensibilities, and techniques on a global scale.[38] Still others stress the role of less bureaucratic forms of social organization, finding the transnational effects of the nonstate in social movements, protest campaigns, and coalition-building activities.[39]

These forays into the politics of the nonstate reveal a wide array of approaches to governance, many of which transcend the territorial, statist, and functional-rational limits of the regime approach to grapple directly with the problem of protecting the planet's places. They offer reconceptualizations of sovereign territoriality; they challenge monocultures of governance and authority; they validate pluralistic, local forms of knowledge and alternative ways of knowing.

One striking aspect of research on the nonstate is how little its chroniclers have had to say about institutionalization. The emphasis is on movements, actors, networks, and relationships, but not on embedded, enduring sets of roles and rules that give shape and form to a whole array of struggles over time. Perhaps this is not surprising; the first intellectual task has been simply to persuade a world equating governance with "the state" that the nonstate exists and matters.[40] Too, the newness of these activities may make it premature to look for evidence of their entrenchment and regularization as an alternative to interstate institutions. After all, they depend fundamentally on such recent trends as the communications revolution, the partial opening of institutional settings such as the United Nations and global conferences, and the expansion of

democratic political space in previously closed societies. It may simply be too early to look for recurring patterns, embeddedness, routinization, or permanence.

Nevertheless, the lack of scholarly attention to the institutionalization of the nonstate is troubling if one's goal is to find institutional foundations for protecting the planet's places. In the realm of global environmental activism, every struggle seems to be a new one. Highly general concepts about sustainability and democratic accountability may survive as organizing principles across individual episodes and campaigns, as do some specific network relationships among individuals or organizations. When reading this literature, however, one is left with the distinct impression that the process must be rebuilt each time, essentially from scratch. Again, perhaps this is no surprise. Networks built around the politics of expertise or the value orientations of well-placed activists are by definition difficult to institutionalize or to translate across particular issue areas. Campaigns spearheaded or linked by transnational organizations depend on the survival and continuity of those organizations, which cannot be taken for granted. Social movements, too, are notoriously impermanent. The lack of staying power of environmental social movements in Eastern Europe in the 1990s is a cautionary tale for global governance strategies rooted in citizen activism and "global civil society."[41] And in transnational expression, they are also prone to the same internal cleavages of power and voice that plague interstate relations.[42]

To be sure, research on the nonstate teaches us a great deal about transnational techniques to protect the planet's places. It offers a rich set of alternatives to the high-modern position toward territory, authority, and knowledge that permeates the regime approach. Thus far, however, it has told us surprisingly little about the stability of the institutional forms meant to convey those techniques.

Toward a Political Sociology of International Institutions

In chapter 2 I develop more fully the argument suggested here—that the bordered, statist, and functional-rational features of the regime form prevent it from confronting the problem of protecting the planet's places. If so, can we find institutional forms with different configurations for these

key institutional properties? Or is the struggle to protect the planet's places caught between the rock of interstate regimes and the hard place of global civil society? Are we left with a Hobson's choice between unhelpful practices that can be institutionalized and helpful ones that cannot?

Answering these questions means asking why regimes systematically display the tendencies I have described. If these features of regimes are merely poor design choices, then other choices can be made. If they are the preferences of powerful actors, then political struggles can be joined. If, on the other hand, they reflect deeply embedded systemic tendencies and powerful, overarching metanorms of world politics—as some sociologists of the international system have argued—then the challenge is structural and of a different order of magnitude entirely.

As suggested in chapter 2, mainstream scholarly research in international relations provides little insight into this question. Regimes are taken as the product of bargaining in the context of anarchy; a regime is understood to have the form it does because this is what the dominant coalition in favor of regime formation wanted as an outcome, subject to the requisites of building that coalition. In contrast, a more sociological orientation toward the institutionalization of global governance calls attention to the prior foundation of global norms within which regime bargaining takes place. This work provides a potentially powerful tool for identifying alternatives to the regime approach. It suggests that regimes are a peculiar, specific form of institution that fixes certain key properties as constants. The reason for this is that regimes are built within the context of an overarching structure of values, such as those legitimizing scientific rationality and bureaucratic administration.

Drawing on these insights from the sociology of international institutionalism, I will argue that international regimes—both conceptually and in practice—tend to reproduce these powerful value orientations of the international system, thereby holding constant certain key institutional features that we could otherwise imagine as variables. As already suggested, I will argue that these critical variables include the institution's position toward sovereignty, borders, and territoriality; its premises about the legitimacy of state authority and the subjects and objects of governance; and its view of rationalist constructions of problems that rest on officially sanctioned knowledge. To differentiate these deeper value orientations and to emphasize that they give shape to more specific institutions, I will refer to them as metanorms of authority, territoriality, and knowledge.

Once these strong presumptions of the regime approach are exposed, regimes can be seen as one specific form among the range of institutions we can imagine. By allowing these metanormative orientations to vary, we can at least visualize a much wider range of different institutional forms, some of which may be better suited to the controversies that surround the local dimensions of our planetary predicament.

Where I disagree with the sociological-institutional view of the international system is with its relatively pessimistic implications: that the structure of metanorms within which regimes form is so powerfully constructed and embedded as to be essentially inevitable. Because the goal of that research has been to show the link between an underlying normative structure and resulting patterns of international cooperation or formal organization, the strong implication is that these norms are fully determinate both of the issues around which cooperation will occur and the form that cooperation will take.[43] In contrast, I will argue that metanorms of scientific rationality, fixed territoriality, or statist bureaucratic administration are powerful but not entirely hard-wired determinants of the resulting institutional form. Instead, I interpret the building of environmental institutions as a site of struggle among conflicting metanormative orientations, some of which are more powerful than others, but none of which are inevitable or universally determinate. In this view, international regimes are not synonymous with international institutions, as many international relations theorists presume; nor are they the inevitable expression of hegemonic metanorms, as the world-polity sociologists strongly imply. Rather, they are the institutional expression of a normative struggle that has had a particular type of outcome. Regimes are what results when territorialism, statism, and functional-rationalism prevail in this struggle. Those triumphs are frequent but not inevitable and are even less so when we recognize institution building as the site of struggle over these framing properties.

Rivers and Watersheds as the Planet's Places

In the chapters that follow, water—particularly as it relates to the world's rivers, watersheds, and freshwater ecosystems—will provide the substantive focus used to explore and illustrate the dynamics of institution building. Global water politics provides an opportunity to contrast a wide range of such dynamics. On the one hand, there has been a sustained and concerted effort to build a conventional global regime for international rivers. More than three decades of effort to articulate global legal principles for shared watercourses culminated in a 1997 United Nations framework convention, passed by a large margin in the General Assembly (but not ratified subsequently by a sufficient number of states to enter into force). There have also been many efforts at regime formation around specific international rivers. There are now more than 150 basin-specific treaties that set out the rights and responsibilities of states sharing a particular waterway. In both global and basin-specific expressions, regime-building efforts have been based on a traditional transboundary construction of a problem: the cooperative governance of border-crossing rivers.

During the past few decades, less formal but increasingly embedded processes of institution building have also emerged. One such process has emanated from the controversies surrounding the traditional instrument of aggressive river modification, the large dam. A pro-dam alliance that links the World Bank, international firms, bilateral aid agencies, and governments bent on developing water resources has collided with an increasingly transnational network of dam opponents grounded in movements for human rights, the environment, indigenous peoples, grassroots development, and democratic reform. The result has been white-hot political conflict, social protest, even violence, but also a surprising degree of institution building, in the sense of increasingly routinized, embedded, normalized, rule-based and role-assuming behavior by the key participants.

These two institution-building processes involve strikingly different constructions of the problem and its political dynamics. In one view, the objects of governance are the world's physically international rivers; in the other, they are physically local watersheds that are being socioeconomically transnationalized. One stresses interstate relations, the other, transnational state–society relations. One is rooted in a cooperative dynamic of bargaining to overcome barriers to collective action; the other is rooted in bitterly contentious social conflict. One elevates an ideal of managing natural resources for optimal use; the other envisions democratic governance of watersheds for ecological prudence and cultural integrity.

Perhaps most important, these institution-building processes differ dramatically in their metanormative positions toward knowledge, territoriality, and authority—the themes that lie at the heart of the framework developed in chapter 2. The process of building a global regime for international rivers bears all the marks of the traditional regime approach: a territorially bounded construction of the problem; a strong presumption of state authority; and an optimistic, universalizing, rationalist understanding of knowledge. The processes of institution building that emerge from the large-dams controversy involve, to varying degrees, the deterritorialization of localities, disparate conceptions of authority, and radically conflicting ways of knowing.

Global water politics is further complicated by a third process of institution building that emanates from the linked set of processes often referred to as global neoliberalism. When applied to water, structural-adjustment conditionality and neoliberal policy reform have produced pressures for what I will refer to as the marketization of water. The result is a set of strong pronouncements as to how water should be managed, emphasizing its character as a natural resource good with economic value. As with the effort to construct dams, the effort to treat water as a marketable commodity has met with opposition, contestation, conflict, and sometimes even violence. Viewed in regime terms, one might argue that governments marketizing water and suppressing dissent are "leaders" while those declining or failing to do so are "laggards." A closer look at the controversy, however, reveals that what is being institutionalized is not simply marketization or its discontents, but rather a dynamic tension between these opposing forces, rooted in metanorms of territoriality, authority, and knowledge that differ, sometimes markedly, from both the international-rivers and anti-dam cases.

A fourth process of institutionalization around water centers on an increasingly concentrated and extensive international network of water

experts, including managers, technologists, economists, analysts, and policy professionals. As discussed in chapter 5, this networking has been plagued by a central tension between planning and marketization. On the one hand there is a universalizing planning paradigm that demands tight connections among social, economic, technical, and cultural choices; on the other there is an underlying emphasis on market values and profit as the basis for water-related behavior. A consequence of this tension has been an ambivalent attitude toward the most fundamentally contested and politicized questions in the water sphere. Nonetheless, water-expert networking processes and the institutions they have generated have produced an important conceptual vocabulary—that of integrated water resources management—within which discussions and struggles over water increasingly take place.

These parallel, sometimes competing, and often conflicting efforts to "normalize" the governance of water—be they grounded in international law, social movement activism, neoliberal marketization, or expert networking—share one important feature: None is a comprehensive watershed governance regime per se. None is sufficiently comprehensive in either scale or scope to be thought of in those terms. Thus the significance of these institution-building processes is not that any one of them constitutes *the* global watershed regime, but rather that each of them articulates what I will refer to as a distinct set of protonorms. I will use this term to refer to norms that have become sufficiently recognizable and well established to become available for application to watershed governance in basins and watersheds that lie beyond their direct reach, but which may or may not become inscribed around those local systems. This raises one of the central questions that this book seeks to address: whether, how, and how much any of these institution-building processes is reaching upstream, so to speak, to shape watershed governance practices in specific locales.

The Stream Ahead

Chapter 2 examines in greater detail the underlying metanormative presumptions about territoriality, authority, and knowledge on which the regime approach is founded. By framing these regime constants as

institutional variables, it becomes possible to envision more fluid understandings of borders and territory, more heterogeneous definitions of authoritative roles, and less positivist epistemologies of knowledge.

After a background sketch of the causes and consequences of transformation of the world's rivers, lakes, floodplains, estuaries, and wetlands (chapter 3), chapters 4 through 7 turn to the politics of specific processes by which four distinct sets of protonorms about water have been assembled. I look first at the extent of formal international regime formation around shared rivers (chapter 4). The focus then turns to alternative institutional arrangements that, like regimes, seek to "govern" water, but with normative and metanormative orientations that differ substantially, sometimes radically, from the regime form. Specifically, the focus here will be on elite international water policy networks seeking to promote global water governance according to largely functional-rational norms of integrated water resources management (chapter 5), the transnational political struggle over the practice of building large dams (chapter 6), and transnational water marketization initiatives and controversies (chapter 7). In each of these four chapters, the goal is to map a process of institution building: to identify the specific content of a particular normative framework explicating how water should be governed; to draw a map of the various nodes, sites, networks, and platforms within the international system and world politics where such norms have begun to gain some traction; and to examine how such norms embed metanormative stances toward authority, territoriality, and knowledge. Although the chapters do not ignore the role of specific states as actors and arenas in this process, the emphasis is on the process of institution building in nondomestic political spaces.

Another important question is where institutionalization occurs. Chapters 4 through 7 show that the state is hardly the only relevant political site of normative development. Yet clearly it remains one such site.[44] Both regime-theoretic scholarship and those perspectives focused on nonstate agency via advocacy networks and social movements have taken the answer to this question to be, for the most part, the state. The former approach has viewed interstate institutions as significant primarily because they shape state behavior; the latter has focused primarily on the state as the object of the normative force of advocates. Taking

the admonition seriously that we should not understate the state, the next pair of chapters (8 and 9) examines the reach of these transnational institution-building processes into domestic law, policy, and practice in two countries, Brazil and South Africa.

Each country-level case study consists of four steps: (1) a historical overview of water politics and law; (2) a discussion of the mix of domestic and transnational forces prompting nonincremental change in water law, policy, and practice; (3) a step-by-step examination of the half-dozen or so major sites of institutional struggle (e.g., federal agencies, the legal system, infrastructure building, local governments, and social movements); and (4) an assessment of the comparative influence of each of the four sets of transnational protonorms sketched in chapters 4 through 7 (international law, water-expert networks, the anti-dams struggle, and water marketization controversies).

The country case studies show how extensively the state mediates transnational normative influences on water-related practices. Yet the cases also illustrate the dangers of overstating the state. In both countries, there are at least a half-dozen prime sites of contestation over water-related law, policy, and practice. Some of these represent what most international relations scholars seem to mean when they invoke "the state"—the centralized administrative apparatus that is to be mobilized as the agent of global environmental governance via some combination of revealed interest, tutelage, moral suasion, or knowledge-based seduction. Yet those administrative systems are shown in both cases to be strikingly varied and uneven normative terrain. The picture is further complicated when one begins to introduce the multiple levels (e.g., provincial and local) and logics (e.g., legislation versus adjudication versus coercion) of the state. As the cases will show, few of the sites of political life where water is governed lie fully within the grasp of the administrative apparatus of the state, and some stretch well beyond its reach.

Brazil and South Africa have been chosen as case studies for two reasons. First, each is central to the global debate surrounding water and rivers, in both the regime and nonregime domains of institution building. Both countries have important transboundary watercourses, tying them to the evolution of international water law and making them central players in interstate water politics. Both have strong and active social movements protesting large dams and/or privatization of water. Both have strong ties to international professional water policy networks. Both are deeply enmeshed in processes of neoliberal structural adjustment, including those in the water sector. If the question were simply one of detecting international influences, these would be the most likely cases and therefore weak tests in terms of generalizability. They are, however, useful test cases of what happens when national policy frameworks are subjected simultaneously to pressures coming from many different directions and with many different normative orientations. In other words, having illustrated in chapters 5, 6, and 7 that interstate regimes are not the only institutional possibility for governing water, the country-level studies can then shed light on the relative depth and reach of competing ways of institutionalizing the governance of water.

A second justification for choosing these cases is that in both countries the legal, political, and policy-making processes surrounding water have been pried open by turbulent change in recent years. South Africa's transition from apartheid has had profound implications for water politics, given water's importance as an element of social control during the apartheid era. Brazil's postmilitary struggle for democratization has had similar ramifications for questions related to water, rivers, and development policy more generally. These dramatic changes have created more than the usual room for nonincremental shifts in policy. For very different reasons, new ideas about how to govern watersheds have been on the table to an unusual extent in each country. The fact that water governance practices were "up for grabs" to a greater than usual extent is a useful feature of these cases, in that it makes it possible to test more substantially the manner, extent, and channels by which various transnational institutional forms may interact with domestic law, policy, and practice.

Drawing upon the findings and lessons in the four global-level and two country-level cases, chapter 10 then seeks to find a broader message in the specific story of transnational water politics.

Social conflicts around water are pervasive, endemic, and accelerating, on scales ranging from local landscapes to the entire planet. In the face of these conflicts, formal processes of bargaining to achieve cooperation

have made little headway. Yet contentious transnational water politics has followed a discernible pattern in which conflicts have become bounded, routinized, embedded, and normalized. To the extent that transnational norms offering some hope of protecting the planet's water places are taking root, they are doing so primarily as a result of contentious environmental politics.

Can global environmental governance mean protecting the planet's places, rather than merely managing pollution across borders? Can it be more than just a technocratic exercise in planetary systems management that is doomed to failure, ripe for capture, or crowded into a tiny corner of global life by the "real" international institutions of transnational capitalism, state sovereignty, and the modern project? If the answer is to be "yes," we must find ways to nurture alternative institutional forms where territorial, state-authorized, and knowledge-stabilized governing frameworks are not possible. Socioecological controversies of the sort that swirl around water will be at the heart of that process.

2

Toward a Social Theory of International Institutions

The Regime Prototype: Montreal and Basel

Perhaps the most famous campaign in the quest for global environmental governance is the Montreal Protocol on Substances that Deplete the Ozone Layer. Reached in September 1987 and entering into force just sixteen months later, the Montreal Protocol was the critical step in consolidation of the stratospheric ozone protection regime. It replaced vague commitments with specific goals and timetables for cutting back on production and use of ozone-damaging chemicals. Montreal also prepared the ground for subsequent agreements that would bring key countries of the global South into the regime, phase out the use of chlorofluorocarbons (CFCs), and tighten restrictions on other culprit chemicals.[1]

The process of building the ozone regime has been recounted as a detective story of science and diplomacy.[2] Scientists raced to prove that the problem was caused by human-induced changes in atmospheric chemistry and to document its full scope and extent. Diplomats searched for a cooperative formula that would balance the interests of North and South and the different concerns of producing and consuming nations. One of the participants in the negotiations, U.S. diplomat Richard Benedick, summarizes the powerful appeal of the Montreal narrative:

> It may not be fanciful to imagine that in future eras the story of the protection of the ozone layer might acquire almost a mythic character. Certainly there has been nothing like it before or since. The elements of mythology were there: a mysterious and remote phenomenon that threatened life on Earth; the sheer good luck that led pioneering scientists to follow their curiosity, bringing at first derision and, two decades later, for three of them, the Nobel Prize; an ideal chemical,

Notes

Chapter 1

1. For the origins and membership of the World Water Council, see Gleick 1998, 172–176.

2. World Water Commission 2000.

3. GWP 2000b.

4. This definition follows Finnemore and Sikkink (1998), who define a norm as "a standard of appropriate behavior for actors with a given identity" (p. 891).

5. GWP 2000b, 78.

6. Sharma 2000.

7. The concept of global governance remains contested. As Lawrence Finkelstein (1995) has pointed out, although the idea of governance "turns up often in scholarly discourse about how states relate to each other in the international system, little attention has been given to what it means" (367).

8. World Commission on Environment and Development 1987, 27.

9. This problem is sometimes framed in terms of the challenge of managing common-pool resources. See Keohane and Ostrom 1995 and Barkin and Shambaugh 1999.

10. For examples of the range of specific and general rules embedded in several important international environmental regimes, see Weiss 1998.

11. Krasner (1982) defines international regimes as "sets of implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations" (p. 2). Rittberger (1993) defines international regimes as "rules of the game agreed upon by actors in the international arena (usually nation states) and delimiting, for these actors, the range of legitimate or admissible behaviour in a specified context of activity" (p. xii). I discuss these and other definitions in greater detail in chapter 2.

12. See in particular Young et al. 1999a. Chayes and Chayes 1995 develop a theory of compliance with international rules based on efficiency considerations, the impact of institutions on interests, and the power of norms.

13. This point is made in Kutting 2000.
14. D. Thomas and Middleton 1997.
15. Mulligan 1999 and Raustiala and Victor 1996.
16. FAO 1997. For criticisms of the FAO data, see WRI 1998, 185.
17. WRI 1998, 156–157.
18. Oldeman 1998, 4.
19. World Conservation Union 1996; WRI 1998, 190–191; Oud and Muir 1997; Abramovitz 1996.
20. United Nations Secretariat of the Convention to Combat Desertification n.d.
21. WRI 1998, 193.
22. UNEP 2002a, xx.
23. Turner 1990.
24. Lovelock 1987.
25. WRI 1998, 180–181. A metric ton is equal to 1.1 U.S. ton.
26. As Paul Wapner (1996a, 252) describes it,

The new challenge to environmentalism, captured in the word globalization, is the recognition that it is no longer simply the transnationalization of ecological processes that needs addressing but also, and perhaps more fundamentally, the transnationalization of social, cultural, political, and especially economic phenomena.... Globalization ... poses new challenges to environmentalists because it represents processes that zip around the globe with increasingly less resistance with significant ramifications for global environmental well-being. (p. 252)

27. Costanza et al. 1997.
28. See Blaikie 1985.
29. Crosson 1994 and WRI 1998, 157.
30. Berry 1990, 200; emphasis in original.
31. For Basel and the WTO, see Krueger 1999.
32. The Montreal Protocol prohibits trade in regulated chemicals with nonparties to the agreement. It is not clear whether this trade ban violates GATT requirements for most-favored-nation and national-treatment requirements or falls under an exception for health and safety considerations. See Weiss 1998 and Brack 1996.
33. This idea is discussed in Conca 1993.
34. World Commission on Environment and Development 1987, annex 1.
35. P. Haas 1989, 1990, and 1992a. For the concept of epistemic communities, see also the Winter 1992 special edition of *International Organization*.
36. Litfin 1994 and 1995.
37. Keck and Sikkink 1998, 2.
38. Wapner 1995 and 1996b.

39. See, for example, Price 2003; Kaldor 2003; Batliwala 2002; Khagram et al. 2002; Smith 2002; Klotz 2002; Smith et al. 1997; Lipschutz with Mayer 1996; Princen and Finger 1994; Taylor 1995.
40. This theme is stressed in particular in Wapner 1995.
41. See Dawson 1996.
42. See Comor 2001; Ford 2003; Amoore and Langley 2004; Baker 2001.
43. On this point see Finnemore 1996.
44. For the debate over the continuing salience of the state in global environmental politics, see Barry and Eckersley 2005.

Chapter 2

1. The Montreal Protocol followed from the 1985 Vienna Convention for the Protection of the Ozone Layer. In its provisions, the Montreal document called for parties (other than developing countries) to freeze CFC production and consumption at 1986 levels and to implement deeper cuts by 1999. The 1990 London Amendments to the Vienna Convention created a funding mechanism to aid developing countries in the transition to CFC substitutes. The 1994 Copenhagen Amendments solidified the regime's implementation procedures and brought additional chemicals under control. The parties have also used the original treaty's built-in adjustment process to tighten restrictions and accelerate timetables without formally amending the agreement; this was the means used in 1990 to adopt the dramatic plan to ban CFCs by 2000. See Weiss 1998, 136.
2. See Benedick 1998; Roan 1989; Parson 2003.
3. Benedick 1998, 332.
4. The decision to ban the waste trade from OECD to non-OECD states was taken at the second Conference of the Parties to the Basel agreement in 1994. However, the United States and other opposing states argued that the ban must be adopted as a formal amendment to the original agreement rather than a decision of the parties present at the conference. The ban was adopted as a formal amendment to the 1989 agreement at the third Conference of the Parties in 1995; it takes effect when ratified by three-fourths of the eighty-two parties present, or sixty-two countries. As of late 2004, forty-eight countries and the European Union had ratified the ban amendment. For Basel and the WTO, see Kreuger 1999.
5. For an example of framing the problem as toxic colonialism, see Center for Investigative Reporting and Moyers 1989 and the website of the Basel Action Network, http://www.ban.org.
6. Clapp 2001.
7. For the role of Greenpeace, see Clapp 2001. For a critical account stressing Greenpeace's use of toxic symbolism, see Kellow 1999.
8. Tolba 1987.

environment/political science

Governing Water

Contentious Transnational Politics and Global Institution Building

Ken Conca

Water is a key component of critical ecosystems, a marketable commodity, a foundation of local communities and cultures, and a powerful means of social control. It has become a source of contentious politics and social controversy on a global scale, and the management of water conflicts is one of the biggest challenges in the effort to achieve effective global environmental governance.

In *Governing Water* Ken Conca examines political struggles to create a global framework for the governance of water. Threats to the world's rivers, watersheds, and critical freshwater ecosystems have resisted the establishment of effective global agreements through intergovernmental bargaining because the conditions for successful interstate cooperation—effective state authority, stable knowledge frameworks, and a territorialized understanding of nature—cannot be imposed upon water controversies. But while interstate water diplomacy has faltered, less formalized institutions—socially and politically embedded rules, roles, and practices—have emerged to help shape water governance locally and globally.

Conca examines the politics of these institutions and maps four distinct processes of institution building: formal international regimes for shared rivers; international networking among water experts and professionals; social movements opposing the construction of large dams; and the struggle surrounding transnational water "marketization." These cases illustrate the potential for alternative institutional forms in situations where traditional interstate regimes are ineffective.

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"This is an outstanding contribution to the study of international environmental politics and world politics more generally. In clear language and moving seamlessly between theory and cases, Conca takes us beyond regime theory to the guts of the messy struggles over power and meaning that shape practices whose routinization may give rise to institutions. He does an admirable job of keeping domestic and international politics visible in the same lens. This is the best treatment I know of the increasingly important international politics of water."
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