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Greening Leviathan: the rise of the environmental state?

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'Bringing the state back in' to research on comparative, inter-, and transnational environmental politics and policy will contribute to better understanding of the limits and prospects of contemporary approaches to environmental politics and the overall evolution of contemporary states once environmental issues become central. The rationale for the state as an analytical perspective in environmental policy and politics is explained, and an empirically oriented concept of the environmental state is introduced, along with a tentative sketch of its evolution in historical perspective. A research agenda on the environmental state is mapped out, centring around variation and convergence in environmental states across space and time; the political/economic dynamics of contemporary environmental states; and inter-linkages among environmental problems, the constitution of political communities, and the functioning of the public power. In conclusion, the ways in which the contributions to this volume address that research agenda are introduced.

Keywords: environmental state; Green state; environmental policy; environmental politics; state

The past several decades have witnessed a dramatic expansion of scholarship concerned with environmental issues on international, local, and individual scales. The expression 'global environmental politics' has become the watchword for a research orientation that emphasises the international character of key environmental problems (such as climate change, biodiversity loss, or ozone depletion), privileges analysis of trends that cut across national borders reflecting political and economic globalisation, and highlights the significance of non-state actors, including business groups, international organisations, environmental non-governmental organisations (NGOs), and other tiers of government (municipalities, regional bodies, and the European Union [EU]). This scholarship has produced a wealth of insights, for example on international environmental regimes (Hoffmann 2005), non-state governance mechanisms (Pattberg 2007),

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and international environmental bureaucracies (Biermann and Siebenhüner 2009). Research on local-level Common Pool Resource management problems was pioneered by Ostrom (1990) and has generated knowledge about the ways communities and groups fail and succeed in managing natural resources. Finally, many scholars have turned to the individual in search of ways to address lifestyle-related environmental problems, resulting in a rich literature on citizen environmental behaviour, perceptions, and attitudes (Dobson 2007, Dunlap and York 2012).

The diverse literatures composing this current reflect an appreciation that environmental issues are truly global problems involving most individuals living today. But typically, there is also an assumption about the declining relevance of the state, not just as an international actor, but also as an organisation that wields political authority within its own borders, and acts as a meaningful social force. Nevertheless, we argue that it is time students of environmental politics directed greater attention to that more traditional object of political inquiry – the contemporary state.

This volume is focused on the environmental state. It seeks to contribute in two main ways. First, there is an explicit ambition 'to bring the state back in' to research on environmental politics and policy. In other words, we wish to reaffirm the state as a central object of study for scholars of environmental politics. Second, we seek to encourage reflection within the politics research community more generally about the evolution of contemporary states once environmental issues become an important preoccupation of government. So we are interested in the impact of the growth of environmental politics and policy on the broader political order. The key conceptual category we invoke to pursue these objectives is the notion of 'the environmental state', which we link to the empirical development of systems of authoritative national environmental governance that occurred first in the developed industrialised countries during the final third of the twentieth century.

This Introduction makes our case for putting the state at the centre of the analysis of environmental politics and policy, elaborates our conception of the environmental state, offers preliminary reflections on crafting a longer-term research agenda centred on the environmental state, and positions the contributions to this volume in relation to this agenda.

(Re)Turning to the state

At first sight, putting the state at the core of research on the way contemporary societies organise their relationships with the natural environment might appear to be going against the flow of knowledge development. In political science and international relations, the governance perspective has widely displaced the state as a central analytical category (Pierre 2000, Bevir 2011). Environmental geographers and sociologists now emphasise a dynamic approach that looks at networks and flows rather than superficially stable units and borders

(Sonnenfeld and Mol 2011). Environmental sociology has produced increasingly skeptical accounts of the possibility of systematic intervention to reconfigure human relationships with the environment. While scholars in the 'Treadmill of Production' tradition see the state as mainly serving a legitimation need of the market (Schnaiberg *et al*. 2002), others have moved attention to deeply embedded behaviour-shaping structures of everyday practices, habits, and routines (Spaargaren 2011). Against these developments, a research focus on the state might appear to reproduce antiquated societal self-descriptions, conveying an illusion of the controllability of social processes, and an overly static vision of social affairs.

Yet, there are good reasons for affirming the significance of the state for the analysis (and practice) of environmental politics and policy. First, and most obviously, states still matter. States structure political, economic, and social interactions, maintain legal frameworks (including systems of property rights) backed by coercive power, and deploy significant economic and administrative resources through taxation/expenditure and their bureaucratic apparatus. In the environmental domain, systems of national regulation remain the foundation of the environmental management practices built up over the past half century (Sands and Peel 2012). Of course, how states operate and what they do depends on complex interactions among varied actors that evolve over time. Municipalities and regional governments are active in the environmental sphere, although these too are ultimately components of the state. International organisations and treaties are important, but remain largely dependent on the states that created them. The influence of the EU in environmental affairs has been increasingly evident for several decades. The EU is an evolving *sui generis* political entity, but member states retain a significant direct influence in decision making and policy implementation, and to the extent that the EU determines the development of environmental governance within its sphere (and acts as a unified external political actor), it comes to display 'state-like' characteristics. Environmental governance arrangements now involve 'market-based' approaches, multi-partite agreements, and non-state mechanisms (Wurzel *et al*. 2013). But one should not forget the extent to which these rest on regulatory foundations (consider emissions trading), explicit state sponsorship (e.g. in the form of 'negotiation in the shadow of hierarchy'), or implicit support. States stand at the juncture of domestic and international political order. They remain the most powerful human mechanism for collective action that can compel obedience and redistribute resources. And it is not just that states actually wield power, but also that they are understood to embody legitimate authority.

A focus on the environmental state differs, for example, from environmental policy perspectives that mainly emphasise 'instruments' or 'networks'. It does so by putting the agency of the state, as well as historically defined patterns of state institutionalisation that structure political interaction, into the spotlight. By adopting the state as a central analytical category, researchers can explore its role in the constitution and reproduction of governance arrangements, the

stabilisation of framework conditions for everyday routines, and the organisation of networks and flows. It helps to focus attention on the venues and processes of the authoritative determination of contested social arrangements. Once established, state agencies and practices influence the discourse and knowledge of other organisations in their field (Scott 1998). State agencies act to shape their societal and organisational environment, as highlighted, for example, in the corporatism literature (Streeck and Schmitter 1985). State structures and programmes tend to persist over time, although their functions might alter, depending on the coalitions that support them (Thelen 2012). This can be understood in evolutionary terms: state agencies are a significant element in the 'ecology' within which political interactions occur. The state's authoritative character, and its institutionalisation of mechanisms for collective decision making, mean that it can respond to the 'public good' and 'free-rider' dimensions of environmental problems, as well as to the distributional conflicts they typically embody. Of course, state institutions are themselves the objects of political struggle, and are continuously contested – both internally and externally. So, ostensibly environmental institutions can serve a range of other purposes, depending on the actor coalitions that influence events. Nor should the state be considered a single and unified entity: rather it is fragmented, self-contradictory, and only partly coherent. These considerations suggest the importance of an historical perspective on the development of the state's engagement with environmental issues. We therefore tend to disagree with perspectives that see the state as axiomatically anti-environment, irrevocably locked into a historical project of dominating nature (Polanyi 1944, Leiss 1972). While we acknowledge the continuous influence of older, Promethean layers of the state, we stress that environmental engagement can be empirically observed, and we are interested in the ensuing internal tensions among different parts of the state, rather than considering it as a monolithic entity.

Concern with the state can also encourage researchers to see environmental governance in a wider political context that includes the specific character of state–societal interactions, constitutional and legal norms, administrative practices and political culture, electoral systems, and mechanisms of representative democracy. There are tensions and complementarities among the issue areas with which states are preoccupied (including economic management, social welfare provision, and security) and among the specialised institutions established to handle these other domains. A focus on the state points to the linkages between environmental politics and policy and more general patterns of political continuity and change. And it raises the question of what impact the engagement with environmental issues has had on pre-existing state structures and practices.

Finally (and closely related to the previous point), invoking the state as a central analytical category can facilitate connections with significant research traditions that were not focused on the environment (Held 1983, Pierson 1996). This is particularly important with respect to the analysis of the historical evolution and character of the modern state, including comparative work on

welfare states (Esping-Andersen 1990), varieties of capitalism (Hall and Soskice 2003), and democratisation (Huntington 1991), as well as to long-standing arguments about the nature of politics, the appropriate role of the public power in social life, citizenship, political obligation, justice, rights, and so on. Drawing on these traditions can potentially enrich environmental scholarship and serve to accelerate the transfer of findings from the environmental sphere into other areas of political enquiry.

To be clear, our argument is not that we should concentrate on the state to the exclusion of other analytical categories. Rather, it is that appropriate attention to the state – in both its domestic and international incarnations – remains critical if scholars are to gain deeper insight into environmental politics and policy.

The environmental state

There is a substantial tradition of scholarship that has put the state, and national political processes and institutions, at the centre of environmental enquiry, including work on government and policy (Jordan *et al*. 2003, Durant *et al*. 2004), comparative politics (Enloe 1975, Jänicke and Weidner 1997, Hanf and Jansen 1998, Weidner and Jänicke 2002), political theory (Barry 1999), and international politics (Lipschutz and Conca 1993). Several recent comparative collections have further extended such work (Steinberg and VanDeveer 2012, Duit 2014, Bäckstrand and Kronsell 2015). Important themes explored here include systems of national environmental governance (Lundqvist 2004), comparative environmental performance (Scruggs 2003, Fiorino 2011), state society linkages (Dryzek *et al*. 2003), normative foundations of a cosmopolitan Green state (Eckersley 2004, Barry and Eckersley 2005), and the parallels and interactions between environmental and welfare states (Meadowcroft 2005, Gough and Meadowcroft 2011).

To date, scholars exploring these issues have invoked a variety of expressions, including the ‘Green state’ (Dryzek *et al*. 2003, Eckersley 2004, Christoff 2005), the ‘ecological state’ (Lundqvist 2001), the ‘environmental state’ (Mol and Spaargaren 2002, Meadowcroft 2012), the ‘ecostate’ (Meadowcroft 2005, Duit 2014), and the ‘eco-social state’ (Koch and Fritz 2014). Standard usage has proven elusive, with different analysts vesting the terms with different normative content and empirical associations. We have opted for ‘environmental state’ because it seems most closely aligned with the way state intervention around these issues is actually framed in ongoing political practice, and fits with an empirically oriented research agenda.

So what do we mean by an environmental state? We understand this to be a state that possesses a significant set of institutions and practices dedicated to the management of the environment and societal–environmental interactions. Typically, this includes: environmental ministries and agencies; framework environmental laws; air, water and waste management legislation and associated regulatory bodies and mechanisms; dedicated budgets and environmental finance

and tax provisions; and scientific advisory bodies, councils, and research organisations. With the environmental state, the state's role in managing social–environmental interactions becomes a continuous focus of political argument and contestation. Thus, an environmental state has specialised administrative, regulatory, financial, and knowledge structures that mark out a distinctive sphere of governmental activity, while the environment and what governments should do about it has become an issue of ongoing political controversy. In short, management of environmental problems becomes an irreducible element of what governments actually do, and the environment becomes an unavoidable theme of political discourse.

For some, this conception will appear too broad: by the early twenty-first century, all the developed democratic countries – and many developing countries (some with distinctly undemocratic political regimes) – could be captured under this rubric. Should we not reserve such a term for the real leaders, for states that have substantively internalised ecological principles and are making real progress in building a new Green economy? While we acknowledge that for some purposes such an approach may be useful, our intention is rather to emphasise the ubiquity of contemporary state engagement on the environmental terrain, and to draw attention to the diversity of structures, policies, and outcomes with which this is associated.

Environmental states display different forms of institutionalisation, with varied administrative structures, policy instruments, supporting coalitions and elites, policy priorities and issue areas, cleavages and contradictions, and patterns of normative justification. They differ in their capacities, and can be unevenly developed across issue areas and levels of government. Environmental states may be more or less robust, and more or less firmly rooted in particular societal practices, coalitions, discourses, and norms. They display varied patterns of tension between the environmental and other areas of state activity, and may be more or less successful in articulating and realising specific environmental goals.

In line with existing usage of 'state' in the policy sciences, we use 'environmental state' to refer both to the specific institutions concerned with the environmental sphere of state activity, as well as to the larger polity within which they are found. The context will typically make clear whether we are talking about the broader or narrower meaning. There is a direct parallel here with discussions of the 'welfare state', where the term can refer to both a state's welfare apparatus and the political community possessing such an apparatus (so we may talk of Germany as both 'having' and 'being' a welfare state).

Thus, we understand 'the environmental state' as a theoretical abstraction that is based on the analysis of the empirical development of actually existing states. The environmental state emerged first in developed countries during the final third of the twentieth century. How such states actually function and the degree to which they actually secure environmental 'goods' is a question for empirical investigation. Of course, it is possible to enquire into the normative principles

and assumptions articulated by such states, to consider how thoroughly these are embodied in their activities, and what patterns of state activity might be more consistent with various environmental perspectives and norms (including those of an idealised 'Green state' that might more consistently uphold 'ecological rationality' or ecocentric values).

Basic dimensions of the environmental state

One way to approach the environmental state is to consider four dimensions that it presents to the political community: as a system of regulation, an administrative apparatus, a corpus of ideas and expert knowledge, and a site of contestation and decision. In the first sense, the environmental state appears as a system of intervention influencing societal–environmental interactions. It encompasses environmental laws and regulations at all levels of government, including controls on pollution, the disposal of waste, resource extraction, the construction and operation of industrial facilities and energy and transport infrastructure, as well as measures for the protection of species and habitats. And there is a complex web of policy and programmatic initiatives involving taxation and expenditure through which states manage individual and collective conduct with environmental consequences.

A second dimension of the environmental state is constituted by the specialised administrative apparatus erected since the late 1960s. A core set of such organisations – including national environment ministries and agencies, parliamentary committees with environmental responsibility, and assessment and advisory bodies – can now be found in most developed and many developing states. But the reach of the central environmental bureaucracy may extend outward, involving units spread across other departments and branches of government, depending on how seriously the issue of 'environmental policy integration' has been pursued (Jordan and Lenschow 2010). And the apparatus of environmental administration is also found at the regional and local levels. The importance of this dimension of the environmental state should not be underestimated – an established administrative structure within government populated with a cadre of public officials with explicit responsibility for environmental protection provides continuity to the management of environmental issues beyond the issue–attention cycle (Downs 1972). It is important for advocating environmental concerns from within the state apparatus, as well as for providing the Green knowledge and expertise necessary for making informed decisions on environmental matters. And it has set in motion self-reinforcing dynamics that may prove influential in the long run for the shape and extent of the environmental state (Pierson 2004, Paehlke and Torgerson 2005, Levin *et al*. 2012).

The third dimension includes ideational aspects of state environmental involvement, and has two main sides. First, the state acts as a disseminator (and to some extent a generator) of environmental ideas, discourses, and values. From the design of preschool educational curricula to the launching of nationwide

advertising campaigns, many governments seek to persuade citizens to consider the environmental consequences of their actions. This ideational presence can be understood as an effort to promote greener values and attitudes. But it is also part of a continuing effort to legitimate state environmental intervention. Nor should it be forgotten that state institutions propagate quite particular understandings of the relative significance of environmental issues and approaches to deal with them. Second, the state, through funding scientific research and maintaining highly specialised public agencies, plays a pivotal role in generating environmental knowledge about the condition of ecological systems and the consequences of human–environmental interactions, both within and beyond national borders.

Finally, the state serves as an arena for environmental conflict and a site for authoritative decision-making processes. Specialised environmental institutions provide an anchor for argument, consultation, lobbying, and negotiation around the definition of problems and solutions and the details of policy design and implementation, while the general structures of the state (parliament, electoral cycle, the courts, and so on) provide the context within which broader political and policy goals are fought out and authoritative decisions are taken. In other words, the environmental state appears as an institutional framework within which environmental values are contested both inside and outside government. Within the environmental sphere, and in contrast to other parts of the state, political interests have to be articulated in ways that take the environment into account, however weak the substantive environmental commitment might be (Feindt and Oels 2005).

The evolution of the environmental state

These four dimensions of the environmental state are closely intertwined. Environmental states emerged as an outgrowth of a process of political conflict and policy development within advanced industrialised nations, establishing them as the locus for environment-related debate and decision. Their bureaucratic structures, regulatory modes of intervention, and ideological justification were first articulated in OECD-type countries with their privately owned and market-mediated economies and representative democratic political systems.

Significantly, the new environmental mandates and programmes were ‘layered’ on top of pre-existing societal arrangements, creating tensions with more deeply embedded state imperatives (Hunold and Dryzek 2002), rules (Steinberg 2015), and institutional practices. In particular, the institutionalised primacy of economic and security considerations (and to a lesser extent social welfare policies) contribute to defining the space within which the environmental state is operative. Over time, there has been continued evolution in policy frameworks, deployment of a greater range of policy instruments (including ‘market-based’ mechanisms and negotiated agreements), and a ‘widening’ and ‘deepening’ of the social reach of environmental policy as its relevance across

sectors, and the scale of the changes to existing practices that would be required to bring environmental problems under control, has become clearer (Weidner and Jänicke 2002). The call for 'environmental policy integration' from the late 1980s (embodied in the discourse of sustainable development) reflected a perception that environmental perspectives needed to be more deeply embedded in sector policy (transport, resource industries, energy, agriculture, and so on; Lenschow 2002, Nilsson and Eckerberg 2007, Feindt 2010). While at some level these new environmental regulatory mechanisms have proven remarkably successful – cleaning up toxic sites, improving air and water quality, and so on – new issues such as biodiversity loss or marine plastic pollution have continued to emerge, and some problems such as emissions of particulate matter, eutrophication of surface waters, or CO_2 emissions have proven stubbornly resistant to solution (Durant *et al*. 2004).

Regulation and redistribution

There are intriguing historical parallels between the growth of the environmental state and the earlier development of the welfare state. In each case, a significant expansion of the regulatory remit of central state power was justified by pointing to concerns that were not being addressed adequately by markets, voluntary action, or local government (Meadowcroft 2005). Yet, characteristic forms of intervention of the two sets of institutions are rather different, with the welfare state securing a substantial redistribution of resources (through taxation and state expenditure) and organising the provision of social services, while the environmental state acts mainly though regulation to enforce environmental standards and prohibitions. Of course, the environmental state is also 'redistributive' in the sense that it allocates costs and benefits associated with environmental goods and harms (among groups and regions and across time), but the distributive effects rarely constitute the main policy rationale, and the instruments used to reallocate obligations and entitlements are often differently orchestrated (cf. Gough 2016).

Other contrasts relate to the forces that propelled these extensions of state activity, and which continue to influence the way demands are articulated in political systems (Dryzek *et al*. 2003). Social democratic (or more generally 'left') parties and trade unions played an important role in placing welfare programmes on the political agenda. Today, in developed countries, substantial societal constituencies have a direct material interest in continuing core welfare-state programmes, making radical restructuring difficult (in the absence of acute crisis), notwithstanding the aspirations of some political currents (Streeck and Thelen 2005). Despite the association of more ambitious environmental policies with centre-left parties, environmental advocacy fits less obviously with the established left–right cleavage. Although environmental issues affect material living conditions (health, life quality, economic opportunities), and do not merely reflect an existential shift towards 'post-material' preoccupations, the more diffuse and long-term nature of many environmental

problems, the fragmented ways diverse impacts are perceived by different social groups, combined with the extent to which scientific and technical expertise is required to understand environmental issues, impose significant challenges for the creation of political coalitions to promote enhanced environmental protection.

Internationalisation from below

Although environmental states were in one sense a 'national' creation – involving the establishment of distinct sets of national institutions and legal frameworks (with centralised governance of issues previously left unregulated or under local control) – from the outset, they possessed an international resonance that has only grown stronger over time. In other words, defining a 'national interest' in environmental protection had external as well as domestic ramifications. Early on, it was appreciated that developed countries faced similar challenges in managing pollution, hazardous chemicals, and so on. The 1972 Stockholm Conference on the Human Environment framed the issue as a common challenge, but it also revealed a developed/developing country fault line, which has continued to colour efforts at international environmental cooperation to the present day. By the early 1970s, the OECD was already worrying that environmental regulation could act as a restraint on trade and actively promoting regulatory harmonisation (Long 2000). From the 1980s, trans-boundary pollution (acid rain) and then truly global issues (ozone depletion, climate change) acquired increasing salience.

Three manifestations of this evolving internationalisation stand out. First, the convergence of policy portfolios, regulatory instruments, and institutions that can be observed across industrialised countries (Holzinger *et al*. 2008): countries are becoming increasingly similar in how and when they respond to environmental problems, a process mediated by international organisations such as the OECD and the EU (Busch and Jörgens 2005, Knill *et al*. 2010). Second, the expansion of the environmental state model beyond the small group of Western democracies where it originated: as Steinberg (2001) and Sommerer and Lim (2016) show, BRIC countries and other emerging economies are rapidly expanding their environmental policy portfolios and administrative capacities. This has vastly extended the varieties of polity (developing as well as developed, authoritarian as well as representative democratic) where environmental states can be found. Third, the continuous development of an increasingly dense set of international governance institutions that also have profound implications for how national-level environmental systems are being governed (Biermann and Dingwerth 2004, Young *et al*. 2008). The difficulty of securing a binding and substantive climate agreement should not obscure the significance of international accords in other environmental areas (e.g. endangered species, toxin control, forestry) that are being implemented and even enforced within nations (Weiss and Jacobson 2000, Roberts *et al*. 2004).

Adjustments to state structures, practices, and priorities

Just as the massive expansion of welfare institutions made late twentieth-century states very different creatures from their nineteenth-century predecessors, so the emergence of the environmental state in recent decades signals further shifts in the character of the modern polity.

The emergence of the environmental state has ushered in a partial transformation of the nature of state authority. When one understands states as 'organizations claiming control over territories and people' (Skocpol 1985, p. 9), dominion over the natural resources located on that territory – and over who has access to them and under what conditions – has always been part of the equation. The concept of the modern state is intrinsically linked to the sovereign exercise of authority and claims to a monopoly of legitimate force within the state territory, including control over the ownership and disposition of physical resources. Examples are the early regulation of hunting and grazing rights, mining, logging, and land-use laws. The notion of an 'environmental state', however, presumes the discursive constitution of the (human) 'environment' as an object of governance, which really appeared only in the 1960s. The environmental state exercises authority to 'protect the environment' (air, water, land, species, ecosystems, landscapes, and so on) because these are understood as critical to individual and collective welfare, public health, economic activities, collective values and identity, and to the long-term good of the political community. This leads to changes to established property rights: for example, the conditions of land tenure or the rules under which businesses conduct their activities (Feindt 2013). And there are inevitable (and often only partly resolved) tensions as new claims, agencies, and programs rub up against pre-existing expectations, institutions, and legal frames. For example, water rights originally allocated on a 'first come first served' basis may leave no share of a river flow for 'ecological services' such as biodiversity conservation. Producer 'take back' laws on consumer products extend businesses' responsibility for products they have sold, and a precaution-based chemicals policy can shift the burden of proof around the risk and safety of novel substances (Jordan *et al*. 2003).

In this sense, the emergence of the environmental state coincides with a (partial) transformation of the terms on which states exercise authority, as well as the way such authority is legitimised (e.g. Hoppe 2005). Of critical significance in this regard is the role of modern science, which is essential to diagnosing the causal forces at play in environmental degradation, including understanding the 'normal' operation of natural systems, the character of human disruption, and the consequences for human and ecosystem health and welfare. But it also involves a re-interpretation of values related to future generations, nature, and so on. To some extent, the environmental state makes a claim to act in the name of 'ecological rationality' – understood here as reasoning about the societal value of ecosystems and their protection – but the degree to which this is actually the case remains an empirical question.

There is also a corresponding transformation of citizenship going on in many contemporary societies. Closely integrated with the notion of the modern state is the conception of the citizen bearing a bundle of exclusive obligations and entitlements (Marshall 1950). The environmental state introduces both new obligations (from recycling to accepting mandatory environmental education at school) and new entitlements (e.g. to enjoy tolerable levels of air and noise pollution even in inner-city environments or to have access to environmental information). The emergence of an 'ecological citizenship' (Dobson 2007) or a possible formulation of a Green social contract can thus be seen as an important transformation of state–society relationships.

More generally, modern states find themselves attempting to reconcile multiple pressures as they navigate a turbulent political context where they are expected to maintain and enhance economic prosperity, provide an array of public services, ensure security (internal and external), and manage environmental burdens. Some writers conceptualise this in terms of state 'imperatives' (e.g. Hunold and Dryzek 2002). States cannot neglect issues critical to their survival, to the welfare of dominant elites, and (depending to some extent on the character of political arrangements) to the welfare of the population more generally. For example, state incumbents seek to avoid: disruptions to a healthy economic climate that provides fiscal resources required to sustain operations, and more generally keep business (and the broader population) happy; organised challenges to domestic and external security; or a general collapse of the legitimacy of established political institutions. From this perspective, the environment joins these imperatives when damage (or threat of future damage) becomes increasingly serious, begins to impinge on other core processes – including economic management (costs of pollution, erosion of natural capital), public welfare (health impacts, essential quality of life), security (climate refugees, resource conflicts), and citizen confidence in the basic competence and legitimacy of the political order (Meadowcroft 2012). Recent arguments about 'ecosystem services' (that present the environment as a critical underpinning of economic growth, UNEP 2012), or 'environmental security' (that recast environmental issues such as climate change as threats to national security) can be understood as moves to strengthen environmental linkages to entrenched economic and security interests (and in so doing also to alter the way environmental protection is understood).

Importantly, environmental pressures are not automatically turned into state imperatives, but only become practically significant to the extent that relevant groups and powerful actor coalitions turn to the state for remedy and support, or blame and complaint. Whether and to what degree these transformations occur is of course an empirical question. The result will depend on the strength and type of pro-environmental forces on the one hand, and the type of existing state structure on the other – a thought that calls for a comparative and historically informed research agenda.

The environmental state as research agenda

Conceptualising the development of national systems of environmental governance in terms of the growth of an environmental state draws attention both to the central place states occupy in managing (but also in creating and in failing to manage) environmental problems and to the importance environmental issues assume in the political and administrative life of contemporary states. It also helps define a research orientation that links politics, policy, and polity (Bäckstrand and Kronsell 2015), locates environmental regulation within the complex of (often contradictory) demands made on modern governments (Dryzek *et al*. 2003), and encourages a context-specific understanding of the ways political and economic institutions engage with the environmental problematic.

In developing such a research agenda, and building on the productive scholarship of the past few decades, it seems particularly important to establish: a more systematic understanding of environmental state variation and convergence across space and time; a deeper appreciation of the political/economic dynamics of contemporary environmental states; and a more adequate understanding of inter-linkages among the environmental problematic, the constitution of political community, and the functioning of the public power.

Building a more systematic understanding of variation and convergence in environmental states across space and time

Although quite a lot is known about the development of environmental law and administration in specific countries (e.g. the USA, the UK, Germany, or Sweden), we are far from having a clear view of the evolution of environmental states more generally, especially as environmental policy becomes more deeply institutionalised in countries whose political and economic institutions lie far from the original OECD template. The four dimensions of the environmental state discussed above – as a system of regulation, an administrative apparatus, a corpus of ideas and expert knowledge, and a site of contestation and authoritative decision – have been manifested in different ways in different times and locations. Yet, our knowledge of their historical evolution and of patterns of cross-national variance and convergence remains elementary, to say nothing of developing a deeper theoretical understanding of the causal factors that have contributed to the varied treatment of different environmental issues in different states or which are driving convergence.

Bäckstrand and Kronsell (2015) have recently reminded us of the importance of typologies of Green or environmental states for clarifying thinking and developing understanding. Typologies may have varied descriptive, analytical, and normative ambitions, but they are certainly helpful in organising knowledge, focusing attention, identifying causal factors, and generating more tractable research questions. The analytical value of such classification is demonstrated

in other fields of state research, for example in Esping-Andersen's three types of welfare states, and in the distinction between coordinated and liberal market economies made in the varieties of capitalism literature (Hall and Soskice 2003). There are a number of suggestions for similar typologies of environmental states (consider Christoff 2005, Jahn 2014, Lövbrand and Linnér 2015, Duit 2016), but to date, none of these efforts has won wide acceptance within the scholarly community. One issue bedevilling such efforts in the environmental area relates to the quality of data (Duit 2014). Figures on environmental expenditure and the scale of the environmental administration are plagued by confusion and inconsistency (Fiorino 2011). Information on regulation and other policy instruments is often confined to the presence or absence of a mechanism, with little knowledge about substantive affinity or the relative consistency of implementation and related practices. So developing more adequate data and analysis must be a priority. Another challenge relates to the multidimensional character of the 'environment', in so far as environmental governance is not dealing with one 'thing' but with a collection of complex, diverse, and even partially incommensurate domains. Much more work needs to be done to understand the dynamics of state development related to these domains, and the different ways in which they may be encouraged or held back by the state, if we are to produce more convincing typologies.

Environmental 'capacity' (Weidner and Jänicke 2002) and 'environmental performance' (Fiorino 2011) are two issues that have already received considerable attention. But historical and theoretical knowledge on either account remains inadequate. Indeed, deciding exactly what is meant by such 'performance' and how to assess it is far from trivial (Mickwitz 2006, Duit 2014, Meadowcroft 2014). Some scholars have advanced generalisations about the influence of state structures on environmental outcomes, including factors such as a proportionally representative electoral system, neo-corporatist interest representation, economic development, democratic institutions, federalism, and international engagement. The availability of cross-national data on industrial emissions led a first generation of studies to seek correlations between political macro-structures and reductions in point-source emissions (cf. Jahn 1998, Scruggs 2003). Most of these associations are contested (cf. Neumayer 2003). So, we should not forget Fiorino's (2011) cautious conclusion to his survey of the comparative literature on environmental performance – that these things matter, but in different ways in different circumstances. At the same time, a focus on the environmental state can add to the understanding of different state traditions and trajectories more widely.

Developing a deeper understanding of the political/economic dynamics of contemporary environmental states

The focus here is on the intersection of economics and politics, and the way institutions, processes, actors, and interests interact in the co-evolution of

economy and polity, the global market system, and international state competition. Debates over the economic impact of environmental regulation go back to the beginning of the environmental era (Dryzek 2005). State preoccupation with economic management is generally seen as a barrier to environmental action: business tends to oppose more stringent standards that add costs and extend state economic intervention, while politicians worry about weakening local enterprises, losing jobs, or offending markets, workforce constituencies, and business elites. Within the state, finance ministries and departments linked to economic interests usually act as a break on more ambitious environmental goals. As late arrivals – a product of the 'layering' described earlier – environmental programs and agencies are generally in a structurally weak position, and in their inception phase are often staffed with personnel socialised in very different policy areas. However, some businesses gain from regulation, which can reward technological leaders and protect regulated markets (Vogel 1997, Jänicke and Jacob 2004). In the broader context of a national economy, environmental initiatives can drive efficiency and innovation (Porter and Van Der Linde 1995). Despite opposition from vested interests, states have developed extensive environmental programs. This raises questions about the circumstances in which pro-environmental change is possible, the coalitions of political and economic actors that secure change (cf. Binder *et al*. 2001), and the nature of the reforms that open up (rather than close down) pathways to continued improvement (Stirling 2008).

In a context where some governments and international organisations are now calling explicitly for a movement towards a 'Green economy' (UNEP 2012, World Bank 2012) and/or a transition to a 'low-carbon economy', questions about the potential role of the state in securing or impeding such changes, and of the limits to state agency come to the fore. It is an open question whether the more transformative orientation required to deal with climate change or to give life to a 'Green economy' will encourage governments to revisit issues connected with strategic planning, industrial policy, and the deliberate management of consumption. The dominant reframing of ecological issues in terms of economic development, however, betrays the continued preoccupation of state agencies with economic affairs and relative positions in a competitive global economic system.

Focusing on political/economic dynamics points one towards an examination of the drivers and obstacles to the further development of environmental states, to the ways in which environmental priorities can be defined and redefined by societal actors, and to state positions and economic forces as structural barriers to change. The preoccupation of many environmental states with issues such as 'ecological modernisation', 'greening' of industries, and international harmonisation suggests that the environmental state acts as a switchboard that more or less effectively translates ecological into economic issues, mediating between ecologic and economic rationales. Much remains to be done to appreciate the social forces influencing the strength and shape of such translations, as well as

the form of the environmental state and its interactions with society in different contexts, including interactions among science, public officials, political leaders, business, and popular movements, as well as the relative significance of domestic and international influences. A better understanding of the dynamics of the political economy of the environmental state requires both theoretically refined models of state–society relations in the context of socioecological problems and more in-depth empirical studies.

Acquiring a more adequate appreciation of inter-linkages among environmental problems, the constitution of political communities, and the functioning of public power

Earlier, we argued that state engagement with environmental issues has implied changes in the character of political authority and the understanding of citizenship. Similar claims can be made about practices of everyday politics and administration in the environmental state, and the nature of public political discourse in the face of ecological challenges. There is a need for more substantial empirical work examining how environmental issues are articulated in publics, politics, and public administration; how citizens as well as the representatives and administrators of the environmental state perceive their duties and rights in relation to environmental dilemmas; and how this is changing or replicating broader social understandings of the appropriate roles for government, market, civil society organisations, and the individual citizen. In other words, there is a need to populate the environmental state – to understand better the relationship between state structures, policies, and governance styles on the one hand, and the people that are subjected to these regulatory efforts, who are interpreting, reproducing, and changing the rules and institutions of the environmental state, but who are also engaging politically (through elections, collective action, etc.) to defend or shift these frames. A critical issue here is the roles of participation, representation, democratic accountability, and interest intermediation. We need to understand more about how the patterns of environmental engagement are limited or enabled by varied political practices and regime types.

There is also an important place for more explicitly normative analysis that continues work in the ‘Green state’ tradition, re-examining political community, ecologically based rights and obligations, and the functioning of current political/economic/ecological institutions, and exploring the implications of a more consequent expression of ecological values or ecological rationality for the environmental state. This links to broader critical conversations about human–nature interactions, concern for inter- and intra-generational equity, as well as to the concerns of more traditional state theorists with individual and collective rights, legitimate authority, and the operation of authentic democratic practices.

The papers in the special issue

The contents of this volume are offered as a contribution towards engaging with this broad agenda and advancing scholarship on the environmental state. They engage in different ways with the themes and research priorities identified above. The first two pieces in the collection explore the overall evolution of environmental states. In his contribution, Gough (2016) presents a framework for thinking about the emergence of state activity related to welfare provision and environmental protection. Organising the drivers of their evolution under five headings – Industrialisation, Interests, Institutions, Ideas/Ideologies, and International Influences – he examines the political economy underpinnings of the environmental state, concluding by reflecting on the possible emergence of a 'closer more integrated "eco-welfare state"'. Next, Mol (2016) raises the question of whether, in the new millennium, the institutionalisation of environmental policy may actually be weakening in many states. Weighing the evidence, he concludes that there is no overall trend for markets to displace state authority and that, to the extent that the state has retreated in the environmental domain, this has not necessarily entailed a decline in levels of environmental protection – because other governance mechanisms have picked up the slack. Both of these pieces set the environmental state in historical perspective, engaging with the political economy research theme identified above.

The three contributions that follow examine variation and convergence among environmental states. Duit (2016) assesses environmental governance regimes in 28 industrialised countries, with respect to four basic features: administration, regulation, redistribution, and knowledge production. He identifies four distinct types of environmental governance regimes, which he characterises as 'established', 'emerging', 'partial', and 'weak' environmental states. The focus then shifts to non-Western countries. Sommerer and Lim (2016), evaluating data that relate to 25 policies in some 37 countries, find not only that environmental regulation has spread well beyond the rich industrialised world, but also that some non-Western countries are now acting as 'Green pioneers', and that there is evidence of a global convergence in environmental policy measures. Death (2016) draws on literature in historical sociology, as well as his own field-studies, to show the importance of environmental issues in the development and legitimation of statehood in Africa. He argues that we are currently witnessing instances of a transformation towards post-sovereign and hybrid state forms and the deliberate positioning of African states as examples for climate adaptation. Thus, each of these three essays contributes to the first – comparative – research orientation identified above.

The remaining three contributions to the collection deal in different ways with the national/international linkages that have been a hallmark of environmental state development. Lenschow *et al*. (2016) discuss the impact of globalisation on environmental state capacity by invoking the concept of 'teleconnections', or global inter-regional connectedness. They argue that

socioecological links among spatially distant localities and regions also create new spaces of governance. Taking the example of soy trade between the regions of Rio Grande do Sul (Brazil) and Lower Saxony (Germany), they develop an interdisciplinary framework to understand better the potential role of the local, regional, national, and supra-national state in addressing the environmental implications of specific inter-regional connectedness.

The extension of environment-related state activities in spaces previously considered beyond national authority is explored by van Tatenhove (2016). He illustrates how environmental challenges at sea accumulate from complex interactions between land-based and maritime activities. Yet, the responsibility of nation states for problems occurring outside any state's territory is unclear. As van Tatenhove demonstrates, while the attempted extension of state authority to European regional seas is driven strongly by environmental preoccupations, on the high seas, in particular the Arctic Sea, state environmental concerns appear largely subordinate to states' competitive interests in securing exploitation rights for market players under their own jurisdiction.

Finally, Eckersley (2016) addresses the problem of legitimacy and the cosmopolitan ecological state project. She argues that the environmental state can only accomplish its objectives by collaborating with other states. In particular, the climate-change issue requires developed states to take actions with an internationalist flavour (going first, supporting poorer states, etc.) that seem difficult to justify on the basis of a realist-instrumentalist logic. Eckersley examines the climate discourses of two acknowledged international climate leaders – Germany and Norway – to determine whether the justificatory rationale articulated by their leaders merely echoes national security and ecological modernisation refrains (that are compatible with 'realist, rationalist, and critical Marxist' theories) or rather develops themes compatible with more internationalist and cosmopolitan accounts. Here, Eckersley engages with the third of the research areas outlined above, which relates to political community and public power.

Taken together, the papers in this volume make a strong contribution to an emerging field of scholarship that puts the state back at the centre of environmental politics. They suggest that the notion of the environmental state can be applied fruitfully to a much wider range of polities than has been considered so far. Moreover, they show that an empirically driven study of environmental states can complement the more normatively oriented reflection that has hitherto dominated the literature. They help demonstrate that a focus on the environmental state provides a productive perspective on the understanding of environmental policy, the development of states more broadly, and the relationship triangle between states, societies, and the environment. We are confident that they will help to establish the environmental state firmly as an appropriate research perspective in political science and neighbouring disciplines.

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