Leaders, Pioneers and Followers in Environmental Governance

Duncan Liefferink, Mikael Skou Andersen, Jana Gheuens, Paul Tobin, Diarmuid Torney, Rudi Wurzel

Abstract

This chapter explores the role of leadership in environmental governance. During recent decades, insights from the International Relations and Comparative Politics literatures have been combined to improve our understanding of the different motives, positions, types and styles of leadership. A basic distinction can be made between leaders, who actively seek to attract followers, and pioneers, who focus mainly on stringent internal policies. The complex 'polycentric' dynamic of global and European climate politics gave an important additional boost to the study of environmental leadership. The initial focus on states as leaders has been gradually widened to include the role of followers, as well as leadership by sub-national and non-state actors. However, leadership in and by the Global South still remains largely unexplored.

1. Introduction

Leadership is important for enacting change. The vast general literature on leadership ranges from the analysis of hegemonic power in world politics to individuals like Julius Caesar and United States (US) Presidents (e.g. Burns, 1978; Rhodes and 't Hart, 2014). An entire branch of the Management Studies literature seeks to support inspiring, sustainable, and effective leadership – preferably all of those together. This chapter focuses on the specific body of literature that deals with the dynamics of *leadership in environmental politics and policy*. Leaders in environmental governance initiate new policies, set examples and push for wider action. For example: the European Union (EU) has consistently sought to act as a global climate leader, such as through its 2019 European Green Deal (see below); the 2015 Paris Conference would not have been concluded in its present form without the diplomatic efforts by host country France (Bocquillon and Evrard, 2017); cities annually compete for being awarded the title 'Green Capital of Europe' (Kern, 2019); and companies, such as mobile phone manufacturer Fairphone (Biedenkopf et al., 2019), seek to pioneer more sustainable business modes. What makes certain actors environmental leaders? How does leadership manifest itself?

Although some studies of environmental leadership focus on the individual or organisational level (e.g. Evans et al., 2015), the literature mostly has had a strong focus on leadership by states. We thus start at the global level, by discussing environmental leadership in the International Relations (IR) literature. Next, we show how the leadership theme was taken up by the environmental Comparative Politics (CP) literature. Inspired particularly by the politics of climate change (an area pre-eminently involving all levels of policy-making, from the global to the local), increasingly, links have been established between the IR and CP literatures. More recent theorising has attempted to incorporate the roles of sub-national and non-state actors as leaders in environmental policy.

A useful analytical distinction can be made between pioneers, who actively promote stringent policies for domestic purposes mainly, and leaders that also seek to attract followers in other jurisdictions (Liefferink and Wurzel, 2017). As we will see, this basic distinction can be worked out in various, more fine-grained, typologies. Nevertheless, this chapter will employ 'leadership' as the overarching term. This term subsumes 'pioneership', which does not primarily contain the aim of attracting followers. Furthermore, 'environmental leadership' almost inevitably has normative dimensions. An actor can lead the way to a more sustainable future, but it can also lead the resistance against environmental

action. The latter is usually not regarded as 'environmental leadership' (see Tobin, Torney and Biedenkopf, 2022). This understanding is in line with both the general leadership literature (e.g. Burns, 1978; Rhodes and 't Hart 2014) and the environmental leadership literature (e.g. Young, 1991; Underdal, 1994), which associate leadership with actions that lead to the improvement of the 'common good'.

2. The International Relations perspective

The conceptualisation of *environmental* leadership started in the IR literature. In 1991, Oran Young published a now seminal article, in which he analysed the role of leadership in international regime formation (Young, 1991). His focus was on individuals acting as leaders mainly on behalf of states. According to Young (1991: 285), leaders strive 'to solve or circumvent the collective action problems that plague the efforts of parties to reap joint gains in processes of institutional bargaining'. Leaders pursue a collective goal and not – or at least not primarily – self-interest (see also Malnes, 1995: 94-95). Young distinguishes the following three types of leadership, which still form the basis of many leadership conceptualisations:

- *Structural leadership* is based on material resources. In realist IR theory, this primarily involves military power (Nye 2008), but generally in environmental politics economic power – having financial resources or being able to grant access to a large market – is more important. Also, a state's relative contribution to the problem at stake can be seen as structural power (Liefferink and Wurzel 2017). Without the biggest greenhouse gas emitters – currently the US and China – involved, long-term climate governance is unlikely to be effective.
- *Intellectual* or *cognitive leadership* entails knowledge production and dissemination about problems, causalities, and solutions. This leadership type is particularly important in a 'technical' policy area, such as the environment. Cognitive leadership helps to frame problems and identify the range of practical solutions.
- *Entrepreneurial leadership* is primarily about diplomacy. It relies on negotiating skills, with a view to integrative bargaining and brokering compromises. The importance of this type can be seen by comparing Denmark's relatively ineffective role in forging the 2009 Copenhagen Accord (Andersen and Nielsen, 2017) with France's highly effective entrepreneurial leadership during the preparation of the 2015 Paris Agreement (Bocquillon and Evrard, 2017).

The three types of leadership distinguished by Young (1991) do not mutually exclude each other and can be combined in different ways in practice.

3. The Comparative Politics perspective

The theme of environmental leadership was soon taken up by the CP literature. While one line of research concentrated on comparing domestic factors facilitating environmental leadership by states, another line focused on strategies employed by environmental leader states in the international arena. In recent years, more systematic attention for the role of followers emerged.

3.1. Domestic factors

Martin Jänicke and Helmut Weidner investigated the capacities necessary for developing successful national environmental policies and becoming an international trend-setter or pioneer (e.g. Weidner

et al., 2002). With slight variations over the years, they distinguish: (1) *country-specific factors*, such as the degree of economic development and various political and institutional factors; (2) *issue-specific factors*, such as the visibility and salience of specific problems and solutions; (3) *situative factors*, or 'policy windows', that may change due to, for instance, economic fluctuations, elections or shock events; and (4) *strategic factors*, or the 'will and skill' to act as a pioneer (Jänicke, 2005).

Jänicke observes that '(t)he most important characteristic of "green" pioneer countries is their high degree of economic development' (Jänicke, 2005: 136). In line with this definition, Tanja Börzel (2002) identified economic development – which underpins both policy preference and action capacity – as the key domestic factor explaining leadership. An innovative aspect of Börzel's contribution was that it focused not only on 'pace-setters', but also on 'fence-sitters' and 'foot-draggers' (i.e. followers and laggards, see below) and the political dynamic between them.

3.2. Strategies
The second strand of research within the CP perspective examined the strategies of environmental leader states. With its primary focus on the international process rather than domestic factors, this research line re-connects with the IR perspective.

For example, when Sweden, Finland and Austria became members of the EU in 1995, these countries were expected to join the EU's traditional environmental leaders Germany, Denmark and the Netherlands, known at the time as the 'green trio'. While investigating the strategies of these supposedly 'green' Member States, Liefferink and Andersen (1998) observed that leaders may channel their efforts either directly into environmental policy-making, for instance, by pushing at the EU level new issues or more stringent standards, or indirectly via the introduction of national environmental policies that have an impact on the EU's internal market policies. In addition, they argued that 'green' states may act either with the explicit aim of affecting EU policies or in a more incremental way, starting from policies initially developed mainly for domestic purposes. Liefferink and Andersen (1998) thus already differentiated environmental leaders, who want to attract followers, from those actors who adopt ambitious domestic environmental policies without the explicit aim of recruiting followers. Liefferink and Wurzel (2017) subsequently used the analytical term *leaders* only for environmentally progressive actors who attempt to attract followers and *pioneers* for actors who do not do so. Note that the pioneer role deviates from Young's (1991) and Malnes's (1995) assumption that leaders always pursue a collective goal. Liefferink and Andersen (1998) found that cooperation between the 'green' Member States is by no means obvious, as strategies regarding specific issues often differ.

3.3. Followers
Building on Börzel's (2002) identification of 'fence-sitters' and 'foot-draggers', the topic of followership has gained increased attention within the environmental leadership literature since the late 2010s. Although Börzel's typology distinguished between leaders, followers and laggards, it did not explicitly consider the role of followers and followership.

Torney (2019) defines climate followership as 'the adoption of a policy, idea, institution, approach, or technique for responding to climate change by one actor by subsequent reference to its previous adoption by another actor. Note that there must be intentionality on the part of the follower but not the leader/pioneer'. Torney (2019) goes on to consider the following three central questions: (1) who

3

follows?; (2) through what pathways does followership emerge?; and (3) what conditions facilitate or hinder followership? First – and in line with the increasing attention for leaders other than states (see below) – a wide variety of actor types, including businesses, NGOs, individuals, epistemic communities, can be followers. However, leader-follower relations are more likely to emerge between actors within the same actor type. As regards the second question, followership can materialise through four principal pathways, which can be differentiated according to the logic of social interaction at play (March and Olsen, 1998). In the case of a 'logic of consequences', followership can result from coercion or provision of incentives. In the case of a 'logic of appropriateness', followership can emerge from learning, persuasion or the wish to raise the legitimacy of domestic action (DiMaggio and Powell, 1983). Third, with a view to conditions, followership in the case of a 'logic of consequences' can be enabled or constrained by the extent and type of the leader's material power, ability and willingness to mobilize resources to attract followers. By contrast, the leader's perceived legitimacy and credibility matter more in the case of a 'logic of appropriateness'. In a further development, Busby and Urpelainen (2020) have developed a typology of potential follower types based on motivation and capacity, distinguishing between 'enthusiasts', 'pliables', 'reluctants', and 'hard nuts'.

Empirical investigation of followership is challenging because intentionality can be difficult to identify; a challenge common also to the literature on policy learning and transfer (e.g. Dolowitz and Marsh 1996, Rose 1993). Different actors may implement similar policy solutions independently of each other rather than as a result of leader-follower dynamics. Nothwithstanding these difficulties, climate followership has been studied empirically in a number of contexts, including in international climate negotiations (Parker et al., 2015; Karlsson et al. 2011), and within the US (Wang, 2012), Europe (Tobin & Schmidt 2021; Kammerer et al., 2021), and Asia (Urban et al. 2021), but a significant research terrain remains to be explored.

4. Combining the International Relations and Comparative Politics perspectives

From the late 1990s, the issue of climate change increasingly came to dominate the global environmental agenda. One part of the rapidly expanding literature on global, European and comparative climate politics focused on climate leadership, particularly the EU's role as an alleged global climate leader. Moreover, addressing both the EU's external role and the internal dynamic between the EU institutions and the Member States established connections between the IR and the CP perspectives discussed above.

4.1. Climate leadership

In the 1970's, the US was considered *the* global environmental leader, setting the norm for many product standards for consumer and environmental protection, e.g. on auto emissions and chemical policy, partly due to the sheer size of its economy (Vogel, 1995; Le Cacheux and Laurent, 2015). However, with European integration and the creation of the single European market, the EU has frequently replaced the US's leadership status. At the United Nations' (UN) annual climate Conferences of the Parties (COPs), the EU has explicitly been seeking to press deliberations forward, although it has not always been successful in taking the lead.

An extensive literature rooted in IR has shown how the EU's ambitious pursuit of global climate leadership has evolved from its pre-2009 Copenhagen emphasis on structural leadership (Eckersley, 2020). During the 2010s, from mainly offering material resources, the EU became more entrepreneurial, building alliances and skilfully exploiting diplomatic avenues, continuously

underpinned by cognitive leadership, and culminating with the 2015 Paris Agreement (Bäckstrand and Elgström, 2013; Parker et al., 2017; Wurzel et al., 2017a; Oberthür and Dupont, 2021). Yet, among Global South countries, the EU's leadership role remains disputed, with China emerging as a more powerful player next to USA, though both great powers have occasionally leaned more towards an obstructive role (Parker et al., 2015).

As a basis for understanding the international climate negotiations, the CP literature has explored the domestic factors that can explain how and why one or more of the 'big three' (the EU, USA, and China) have been able to take the lead – or to undermine agreement. Analyses of EU positions are especially rich, due to the confederate nature of the Union, with a dynamic subset of Member States pushing hard for leadership while others are relatively unengaged if not outright sceptical (Carter et al., 2019). The mechanisms within the EU reflect traits conducive to both IR and CP perspectives on leadership. Once the black box is opened up, it becomes clear that Member State domestic politics can help understand both leader and laggard positions. The significance of domestic 'spoilers' to leadership was evident with the Trump administration of the USA and to a lesser degree with regard to attempts by some Member States, especially Poland, to undermine the EU's climate leadership ambitions (Bang and Schreurs, 2017; Jankowska, 2017; Selin and VanDeveer, 2021; and for India: Jayaram, 2018). A better understanding of the interplay between negotiation games that are played simultaneously at the global and domestic level, and how 'win-sets' are identified and become accepted (Putnam, 1988), calls for more and better integration of IR and CP perspectives in future research.

4.2. Towards a more comprehensive conceptual approach
As explained above, the burgeoning literature particularly on climate leadership led to a variety of different approaches to environmental/climate leadership, often combining IR and CP elements. In an attempt to bring together some of the main lines of enquiry, Liefferink and Wurzel (2017) proposed a model encompassing different *positions*, *types* and *styles* of environmental and climate leadership. With some limitations, the model can be applied also to sub-national governmental and non-state actors (Wurzel et al., 2019a, 2019b; see also below)

The starting point of the model by Liefferink and Wurzel (2017) is four *positions* that actors might adopt based on their internal and external ambitions (see Table 1). The level of ambition (high or low) is measured in relation to other actors rather than compared to, for example, a scientific standard that might change over time. High *external* ambitions refer to efforts to influence other actors, i.e. to ('genuine') leadership. High *internal* ambitions can refer to an actor either being the first to adopt a certain environmental measure or formulating the highest environmental standard – or both at the same time. i.e. 'first in class' *and* 'best in class' (Liefferink et al., 2009). A *pusher* (field d) combines high external ambitions with high internal ambitions. Within the pusher category, a further distinction can be made between pushers whose internal ambitions are conditional on the policies of others (conditional pusher), and those who carry on regardless (constructive pusher). When high external ambitions are not underpinned by high internal ambitions, we can speak of *symbolic leadership* (field c). An actor pursuing high internal ambitions in combination with no or limited ambition to attract followers can be seen as a *pioneer* (field b). A combination of low internal and low external ambitions, finally, is characteristic of a *laggard*. In short, rather than assessing leadership on effectiveness or goal achievement, the model examines the intention of actors to attract followers and the domestic policy output that lends credibility to the leadership position.

	Internal ambitions	
External ambitions	*Low*	*High*
Low	(a) Laggard	(b) Pioneer
High	(c) Symbolic leader	(d) Pusher • constructive • conditional

Table 1: Ambitions and positions of environmental leaders and pioneers (adapted from Liefferink and Wurzel, 2017: 954).

Subsequently, leaders and pioneers can use different types and styles of leadership. Building on existing conceptualisations of leadership *types* (in particular: structural, entrepreneurial and cognitive, see Young, 1991), Liefferink and Wurzel (2017) added exemplary leadership as a fourth type to assess how leaders and pioneers exert leadership. Due to their high internal ambitions without the intention to attract followers, pioneers can be seen as mainly using unintentional exemplary leadership. Constructive pushers, in contrast, are likely to set intentionally an example while relying on structural, entrepreneurial or cognitive leadership or a combination of these types of leadership.

Finally, including the *styles* of leadership as developed by Burns (1978, 2003) allows for an assessment of the degree of change of actors' positions over time (Liefferink and Wurzel, 2017; Wurzel et al., 2019b). Whereas transactional leadership is focused on achieving short-term, incremental goals, transformational leadership sets out to establish more profound, long-term change. While in principle the two styles can be combined with all types of leadership, and, thus, with the four positions, the time horizon might vary based on the position. For example, if symbolic leaders try to employ transformational leadership on the international level without the capacity or ambition of backing it up with domestic action, it will most likely remain short-term focused leadership because such a strategy lacks credibility. For instance, the EU's ambiguous role in international climate politics in the early 1990s amounted to little more than symbolic leadership (Grubb and Gupta, 2000; Wurzel et al., 2017c). In contrast, a pioneer consistently using a transactional approach may achieve durable long-term change, e.g. Danish pioneership on nitrates pollution (Andersen, 1997) and Costa Rica's on Payments for Ecosystems Services and forestry (Urban et al. 2021), both in the 1990's. The credibility of an actor is therefore essential for assessing the long-term impact of leadership.

5. Bringing in other actors
The early literature on leadership in environmental politics and policy was rooted in IR and CP and focused on states. However, the literature has increasingly acknowledged that actors other than states, such as sub-national governments, businesses and civil society organisations, can act as environmental leaders too.

5.1. Sub-national actors
The parallel trends of greater devolution and the increasing complexity of many environmental problems (e.g. climate change), have amplified attention paid to sub-national levels. Indeed, Betsill and Bulkeley (2006: 141) argue 'it is only by taking a multilevel perspective that we can fully capture the social, political, and economic processes that shape global environmental governance'. Alongside

being important actors worthy of study in their own right, local actors can elevate other localities' and even national-level environmental performance. The 'California effect' (Vogel, 1995) describes how California's high environmental standards for automobiles led national standards to follow the state's lead, as manufacturers pursued the large and wealthy California market's preferences anyway. It can be seen as a case of structural leadership (through market power) by a sub-national authority. Sub-national leadership is especially important when national policy-makers do not offer environmental leadership or even try to veto action, such as US President Trump (Selin and VanDeveer, 2021).

However, the ratcheting upwards of sub-national standards is not a foregone conclusion. Vogel (1995) additionally identified a 'Delaware effect', also known as the 'race to the bottom' (Porter, 1999; Holzinger and Sommerer, 2011), involving the competitive lowering of sub-national environmental standards to attract businesses, including high polluters. Casado-Asensio and Steurer (2016) find that in Switzerland, federalism produced a 'lowest common denominator' approach regarding climate mitigation in the building sector. Regarding German federalism and also the EU, the 'joint decision trap' can lead to suboptimal (environmental) policy solutions, to avoid a policy being vetoed (Scharpf, 1988). According to Scharpf (1996), joint decision traps can be overcome more easily for product standards (e.g. emission limits for automobiles) than for process standards which stipulate how products can be manufactured, aligning with Vogel's (1995) California effect.

Much empirical research on local level environmental leaders/pioneers has focused upon large and/or wealthy cities which are often seen as laboratories for environmental innovations that can be scaled up. Bulkeley and Castán Broto (2013) examine 627 urban climate change experiments in 100 'global cities', finding that experiments create new political spaces that blur public and private authority. Smaller localities have fewer resources for such experimentation, and institutional capacity is necessary if a locality is to engage with and inspire others, especially internationally, through cognitive leadership in such networks as C40 (Lee and Koski, 2013). Disappointingly, the level of change proposed by C40 cities has been found to support often little more than the *status quo* (Heikkinen et al., 2019). However, there are instances of environmental leadership and pioneership in poorer locations including 'structurally disadvantaged cities', characterised by high unemployment, social deprivation and other problems (Wurzel et al., 2019c).

While actors in the Global South have also displayed environmental leadership, for instance with the creation of the now defunct Clean Development Mechanism of the Kyoto protocol, they have remained under-researched. Keiner and Kim (2006: 1389) place African and South American cities highly in their rankings of transnational sustainability networks. While we often associate local environmental governance as representing 'bottom-up' leadership, some localities outside of the Global North have been found to tackle city-level action differently. Li (2021) explores multiple low-carbon pioneers at the city level in China, where the initial imperative for action is top-down (i.e. central government-initiated), in contrast to the bottom-up California effect. Much city-level climate change research in the Global South has focused on adaptation rather than mitigation (Chu et al., 2016).

5.2. Non-state actors
Non-state actors, such as businesses, charities, campaigning organisations and religious communities can act as important 'nodes' with governance networks. Indeed, independent, overlapping non-state actors are at the heart of polycentric governance (Ostrom, 2010; Jordan et al., 2018; see Chapter 6 of

this volume). However, it is not clear to what degree actors in polycentric governance structures are able to influence 'higher' governance levels and/or engender 'upscaling' of ambition. Proponents of polycentricism tend to understate the significance of power relations: structural power matters, especially if strong power asymmetries exist between leaders and followers (Wurzel et al., 2019b).

Environmental Non-Governmental Organisations (ENGOs) have been at the forefront of environmental action at different governance levels. In Europe, many ENGOs possess offices in Brussels, for lobbying EU legislators in the pursuit of higher standards and transformative change (Fitch-Roy et al, 2020). Well established ENGOs such as Greenpeace and Friends of the Earth (FOE) have long been identified as offering environmental leadership (e.g. Wurzel et al., 2017). In recent years, new ENGOs have sprung up that have tried to offer leadership especially on climate related issues. For example, young people have set up new ENGOs or movements (e.g. Friday for Futures) and/or joined local Youth Climate Councils (Wurzel et al. 2019c). YOUNGO is an official observer at UN climate conferences and seeks to initiate greater ambition at the global level by lobbying diplomats (Thew et al., 2021). The literature remains ambivalent about businesses' ability to act as environmental leaders or pioneers (e.g. Grant, 2017). One case of exemplary business leadership is the social enterprise Fairphone, which produces more sustainable mobile phones (Biedenkopf et al., 2019).

Environmental leadership/pioneership from non-state actors may also be taken up by groups for which the environment is not the main *raison d'être*. Bomberg and Hague (2017) find that Christian congregations in Scotland mobilise on climate change around rituals and symbols that are distinct from other climate groups. Moreover, religious communities have founded several of the 'big players' in the aid, trade and development sector, which in turn seek to drive climate ambition at the global level (Saunders, 2008). Yet, some evangelical groups especially in the US have been at the forefront of opposing climate action (Veldman, 2019). In recent years, ENGOs and development groups have worked more closely together, such as in the run up to the 2015 Paris COP21 (Wurzel et al., 2017). Many trade unions are increasingly rejecting the 'jobs versus environment' dichotomy in favour of sustainable development which puts equal emphasis on economic, social and environmental concerns (Räthzel and Uzzell, 2011). In short, this section has provided a snapshot of how almost all sub-national and non-state actors are *potential* environmental leaders or pioneers.

6. Towards a research agenda

Although our understanding of environmental leadership has advanced over the past decades, several issues remain understudied.

First, while the work on followership has only just started, the dynamics between leaders and followers deserve more attention: when, why and under which circumstances do actors follow or refrain from doing so even in the case of active leadership efforts? These questions warrant a focus on mechanisms. To add greater clarity, the logics of consequences and appropriateness (see above) that may be at work merit attention, as does the policy diffusion and transfer literature (e.g. Busch and Jörgens, 2005; Elkins and Simmons, 2005). Such mechanisms include lesson-drawing (where actors actively use experiences elsewhere to solve domestic problems), transnational problem-solving (where policies are developed in, for instance, transnational elite networks or epistemic communities) and emulation (where policies are copied for normative or legitimacy-driven reasons) (Busch and Jörgens, 2005; Knill and Holzinger, 2008; Graham et al., 2013).

Second, leadership by non-state actors and, to a lesser degree, sub-national actors (such as cities) is still under-researched; their roles need to be more systematically investigated. The notion of polycentricity may provide a fruitful basis for understanding local action, experimentation, learning and diffusion (Jordan et al., 2018). Under conditions of polycentricity, leadership and pioneership exercised by, for instance, corporations or civil society actors, may take on even more diverse forms than under more traditional, hierarchical conditions. Hierarchical governance relations may nevertheless remain helpful for widening the potential range of followers beyond the confines of relatively autonomous polycentric units (Liefferink and Wurzel, 2018).

Finally, studies of environmental leadership – like most other sub-fields of environmental policy studies – tend to focus on rich, industrialised countries, although there are notable exceptions (e.g. Clapp and Swanston, 2009; Jayaram, 2018; Theys and Rietig, 2020; various contributions to Wurzel et al., 2021). Widening the scope to the Global South should be an urgent priority. Here the notion of polycentricity may be even more relevant, as it allows for a more fine-grained analysis of the dynamics between global and regional pioneers and leaders.

7. Conclusions

The study of leadership in environmental governance started in the IR and CP literatures. Increasingly, the two perspectives have been brought together. This interconnection has enabled the development of several typologies describing the different positions environmental leaders may take and the ways in which leadership can be exerted. At the most basic level, a distinction can be made between leaders, who actively seek to attract followers, and pioneers, who promote stringent policies mainly for domestic purposes but whose actions may nevertheless energise other actors. Leaders and pioneers may exert structural, entrepreneurial, cognitive or exemplary leadership, or combinations of those types. Furthermore, leadership implies followership, a theme that was also taken up in recent years. Parallel to this conceptual development, the scope of attention of environmental leadership has been widened to sub-national and non-state actors, such as cities, businesses and various types of NGOs, and to environmental leadership and pioneership in the Global South.

References

Andersen, M. S., 1997. Denmark: the shadow of the green majority. In: M.S. Andersen and D. Liefferink, eds., *European environmental policy: the pioneers*. Manchester: Manchester University Press, 251-286.

Andersen, M.S. and Nielsen, H.Ø., 2016. Small state with a big voice and bigger dilemmas. In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 83-97.

Bäckstrand, K. and Elgström, O., 2013. The EU's Role in Climate Change Negotiations: From Leader to 'Leadiator'. *Journal of European Public Policy*, 20 (10), 1369-86.

Bang, G. and Schreurs, M.A., 2017. The United States: the challenge of global climate leadership in a politically divided state. In: R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 239-53.

Betsill, M., and Bulkeley, H., 2006. 'Cities and the Multilevel Governance of Global Climate Change.' *Global Governance* 12, 141–160.

Biedenkopf, K., Van Eynde, S. and Bachus, K., 2019. Environmental, climate and social leadership of small enterprises: Fairphone's step-by-step approach. *Environmental Politics*, 28(1), 43-63.

Bocquillon, P., & Evrard, A., 2017. French climate policy: diplomacy in the service of symbolic leadership. In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 98-113.

Bomberg, E. and Hague, A., 2018. Faith-based climate action in Christian congregations: mobilisation and spiritual resources. *Local Environment*, 23(5), 582-596.

Börzel, T.A., 2002. Pace-setting, Foot-dragging and Fence-sitting. *Journal of Common Market Studies*, 40(2), 193-214.

Bulkeley, H. and Castán Broto, V., 2013. Government by experiment? Global cities and the governing of climate change. *Transactions of the institute of British geographers*, 38(3), 361-375.

Burns, J.M., 1978. *Leadership.* New York: Harper & Row.

Burns, J.M., 2003. *Transforming Leadership.* New York: Grove Press.

Busby, J.W. and Urpelainen, J., 2020. Following the Leaders? How to Restore Progress in Global Climate Governance. *Global Environmental Politics*, 20(4), 99–121.

Busch, P. O., and Jörgens, H. (2005). The international sources of policy convergence: explaining the spread of environmental policy innovations. *Journal of European Public Policy*, *12*(5), 860-884.

Carter, N., Little, C. and Torney, D., 2019. Climate politics in small European states. *Environmental Politics*, 28(6), 981-996,

Casado-Asensio, J. and Steurer, R., 2016. Mitigating Climate Change in a Federal Country Committed to the Kyoto Protocol: How Swiss Federalism Further Complicated an Already Complex Challenge. *Policy Sciences* 49(3), 257–279.

Chu, E., Anguelovski, I. and Carmin, J., 2016. Inclusive approaches to urban climate adaptation planning and implementation in the Global South. *Climate Policy*, 16(3), 372-392.

Clapp, J. and Swanston, L., 2009. Doing away with plastic shopping bags: international patterns of norm emergence and policy implementation. *Environmental Politics*, 18(3), 315-332.

DiMaggio, P. J. and Powell, W. W., 1983. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160.

Dolowitz, D. and Marsh, D., 1996. Who Learns What from whom: A Review of the Policy Transfer Literature. *Political Studies*, 44 (2), 343-357.

Eckersley, R., 2020. Rethinking leadership: understanding the roles of the US and China in the negotiation of the Paris Agreement. *European Journal of International Relations*, *26*(4), 1178-1202.

Elkins, Z., and Simmons, B. (2005). On waves, clusters, and diffusion: A conceptual framework. *The Annals of the American Academy of Political and Social Science*, *598*(1), 33-51.

Evans, L.S., Hicks, C. C.,. Cohen, P.J., Case, P., Prideaux, M. and Mills, D.J., 2015. Understanding leadership in the environmental sciences. *Ecology and Society*, 20(1), 50.

Fitch-Roy, O., Fairbrass, J. and Benson, D. (2020). Ideas, coalitions and compromise: reinterpreting EU-ETS lobbying through discursive institutionalism. *Journal of European Public Policy*, 27(1), 82-101.

Graham, E. R., Shipan, C. R., & Volden, C. (2013). The diffusion of policy diffusion research in political science. *British Journal of Political Science*, *43*(3), 673-701.

Grant, W., 2017. Business: Greening at the edges. In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 207-20.

Grubb, M. and Gupta, J., 2000. Leadership. In J. Gupta and M. Grubb, eds., *Climate change and European leadership.* Springer: Dordrecht, 15-24.

Heikkinen, M., Ylä-Anttila, T. and Juhola, S., 2019. Incremental, reformistic or transformational: what kind of change do C40 cities advocate to deal with climate change?. *Journal of Environmental Policy & Planning*, 21(1), 90-103.

Holzinger, K. and Knill, C., 2008. Theoretical framework: causal factors and convergence expectations. In Holzinger, K., Knill, C. and Arts, B., eds., Environmental policy convergence in Europe. The impact of international institutions and trade. Cambridge: Cambridge University Press, 30-63.

Holzinger, K., and Sommerer, T., 2011, Race to the bottom'or 'race to Brussels'? Environmental competition in Europe. *Journal of Common Market Studies*, 49(2), 315-339.

Jänicke, M., 2005. Trend-setters in environmental policy: the character and role of pioneer countries. *European Environment*, *15*(2), 129-142.

Jankowska, K., 2017. Poland's clash over energy and climate policy: green economy or grey status quo? In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 145-58.

Jayaram D, 2018. From "Spoiler" to "Bridging Nation": The Reshaping of India's Climate Diplomacy. *Revue internationale et stratégique*, 109(1), 181-190.

Jordan, A., Huitema, D., Van Asselt, H., and Forster, J., eds., 2018. *Governing Climate Change: Polycentricity in Action?* Cambridge: Cambridge University Press,.

Kammerer, M., Ingold, K. & Dupuis, J., 2021. Switzerland: International commitments and domestic drawbacks. In R.K.W. Wurzel, M.S. Andersen and P. Tobin, eds., *Climate Governance Across the Globe: Pioneers, Leaders and Followers.* Abingdon: Routledge, 235-256.

Karlsson, C., Parker, C.F., Hjerpe, M. & Linnér, B-O., 2011. Looking for Leaders: Perceptions of Climate Change Leadership among Climate Change Negotiation Participants, *Global Environmental Politics*, 14(1), 89–107.

Kern, K., 2019. Cities as leaders in EU multilevel climate governance: Embedded upscaling of local experiments in Europe. *Environmental Politics*, 28(1), 125-145.

Le Cacheux, J. and Laurent, E., 2015. The EU as a global ecological leader. In *Report on the State of the European Union*. London: Palgrave Macmillan, 125-138.

Lee, T. and Koski, C., 2014. Mitigating global warming in global cities: Comparing participation and climate change policies of C40 cities. *Journal of Comparative Policy Analysis: Research and Practice*, 16(5), 475-492.

Li, X., 2021. China: Emerging low-carbon pioneers at city level. In: R.K.W. Wurzel, M.S. Andersen and P. Tobin, eds., *Climate Governance across the Globe*. Abingdon: Routledge, 23-44.

Liefferink, D. and Andersen, M.S., 1998. Strategies of the "green" member states in EU environmental policy-making. *Journal of European Public Policy*, 5(2), 254-270.

Liefferink, D., Arts, B., Kamstra, J., and Ooijevaar, J., 2009. Leaders and laggards in environmental policy. *Journal of European Public Policy*, 16(5), 677-700.

Liefferink, D. and Wurzel, R.K.W., 2017. Environmental Leaders and Pioneers: Agents of Change? *Journal of European Public Policy*, 24(7), 651-68.

Liefferink, D. and Wurzel, R.K.W., 2018. Leadership and pioneership: exploring their role in polycentric governance. In Jordan, A., Huitema, D., Van Asselt, H. and Forster, J., eds., *Governing climate change. Polycentricity in action?* Cambridge: Cambridge University Press, 135-51.

Malnes, R., 1995. 'Leader' and Entrepreneur' in International Negotiations: A Conceptual Analysis. *European Journal of International Relations*, 1(1), 87-112.

March, J. G., & Olsen, J. P., 1998. The institutional dynamics of international political orders. *International Organization*, 52(4), 943-969.

Nye Jr, J., 2008. *The powers to lead*. Oxford: Oxford University Press.

Oberthür, S. and Roche Kelly, C., 2008. EU leadership in international climate policy: achievements and challenges. *The International Spectator*, 43(3), 35-50.

Oberthür, S. and Dupont, C., 2021. The European Union's international climate leadership: towards a grand climate strategy? *Journal of European Public Policy*, online. https://doi-org/10.1080/13501763.2021.1918218

Ostrom, E., 2010. Polycentric Systems for Coping with Collective Action and Global Environmental Change. *Global Environmental Change*, 20, 550–557.

Parker, C. F., Karlsson, C. and Hjerpe, M., 2015. Climate change leaders and followers: Leadership recognition and selection in the UNFCCC negotiations. *International Relations*, 29(4), 434-454.

Parker, C.F., Karlsson C. & Hjerpe, M., 2017. Assessing the European Union's global climate change leadership: from Copenhagen to the Paris Agreement, *Journal of European Integration*, 39(2) 239-252. https://doi.org/10.1080/07036337.2016.1275608

Porter, G., 1999. Trade competition and pollution standards: "race to the bottom" or "stuck at the bottom". *Journal of Environment & Development*, 8(2), 133-151.

Putnam, R., 1988. Diplomacy and domestic politics: the logic of two-level games. *International Organization*, 42(3), 427-460.

Räthzel, N. and Uzzell, D., 2011. Trade unions and climate change: The jobs versus environment dilemma. *Global Environmental Change*, 21(4), 1215-1223.

Rhodes, R.A.W. and t'Hart, P., eds., 2014. *The Oxford Handbook of Political Leadership*. Oxford: Oxford University Press.

Rose, R., 1993. What is Lesson-Drawing. *Journal of Public Policy*, 11(1), 3-30.

Saunders, C., 2008. The Stop Climate Chaos Coalition: climate change as a development issue. *Third World Quarterly*, 29(8), 1509-1526.

Scharpf, F., 1988. The joint decision trap. Lessons from German federalism and European integration. *Public Administration*, 66, 239-278.

Scharpf, F., 1996, Negative and Positive Integration in the political economy of European welfare states. In: G. Marks et al., eds, *Governance in the European Union*, London: Sage, 15-39.

Selin, H. and VanDeveer, S.D., 2021. Climate change politics and policy in the United States: Forward, reverse and through the looking glass. In R.K.W. Wurzel, M.S. Andersen and P. Tobin, eds., *Climate Governance across the Globe.* Abingdon: Routledge, 123-141.

Thew, H., Middlemiss, L. and Paavola, J., 2021. Does youth participation increase the democratic legitimacy of UNFCCC-orchestrated global climate change governance? *Environmental Politics*, 1-22. DoI:.

Theys, S., and Rietig, K., 2020. The influence of small states: how Bhutan succeeds in influencing global sustainability governance. *International Affairs*, *96*(6), 1603-1622.

Tobin, P., Torney, D. and Biedenkopf, K. 2022. Leadership: global and domestic dimensions. In T. Rayner, K. Szulecki, A. Jordan and S. Oberthür, eds., *Handbook on European Union Climate Change Policy and Politics*. Cheltenham: Edward Elgar (forthcoming).

Tobin, P., and Schmidt, N.M., 2021. European Union leadership before, during and after the Paris Conference of the Parties. In R.K.W. Wurzel, M.S. Andersen and P. Tobin, eds., *Climate Governance Across the Globe: Pioneers, Leaders and Followers.* Abingdon: Routledge, 142-159.

Torney, D., 2019. Follow the leader? Conceptualising the relartionship between leaders and followers in polycentric climate governance. *Environmental Politics* 28(1), 167-86.

Underdal, A., 1994. Leadership theory: rediscovering the arts of management. In W.I. Zartman, ed., *International Multilateral Negotiation.* San Francisco: Jossey-Bass, 178-197.

Urban, F., Siciliano, G., Villalobos, A., Anh, D.N. and Lederer, M., 2021. Costa Rica and Vietnam: Pioneers in green transformations. In R.K.W. Wurzel, M.S. Andersen and P. Tobin, eds., *Climate Governance across the Globe.* Abingdon: Routledge, 61-81.

Veldman, R.G., 2019. *The gospel of climate skepticism: Why evangelical Christians oppose action on climate change*. Oakland: University of California Press.

Vogel, D., 1995. *Trading up. Consumer and environmental regulation in a global economy*. Cambridge, Mass.: Harvard University Press.

Wang, R., 2012. Leaders, Followers, and Laggards: Adoption of the Us Conference of Mayors Climate Protection Agreement in California. *Environment and Planning C: Government and Policy*, 30(6), 1116–1128.

Weidner, H. and Jänicke, M., eds., 2002. *Capacity building in national environmental policy: A comparative study of 17 countries*. Berlin: Springer.

Wurzel, R.K.W., Connelly, J. and Liefferink, D., eds., 2017a*. The European Union in International Climate Change Politics.* Abingdon: Routledge.

Wurzel, R. K.W., Connelly, J. and Monaghan, E., 2017b. Environmental NGOs: pushing for leadership. In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 221-236.

Wurzel, R.K.W., Liefferink, D. and Connelly, J., 2017c. Conclusion: re-assessing European Union climate leadership. In R.K.W. Wurzel, J. Connelly and D. Liefferink, eds., *The European Union in International Climate Change Politics.* Abingdon: Routledge, 287-302.

Wurzel, R.K.W., Liefferink, D. and Torney, D., eds., 2019a. Pioneers, Leaders and Followers in Multilevel and Polycentric Climate Governance, *Environmental Politics (special issue),* 28(1), 1-186.

Wurzel, R.K.W., Liefferink, D. and Torney, D. 2019b. Pioneers, Leaders and Followers in Multilevel and Polycentric Climate Governance, *Environmental Politics,* 28(1), 1-21.

Wurzel, R.K.W., Moulton, J.F., Osthorst, W., Mederake, L., Deutz, P. and Jonas, A.E., 2019c. Climate pioneership and leadership in structurally disadvantaged maritime port cities. *Environmental Politics*, 28(1), 146-166.

Wurzel, R.K.W., Andersen, M.S. and Tobin, P., eds., 2021. *Climate governance across the globe. Pioneers, leaders and followers.* London: Routledge.

Young, O.R., 1991. Political leadership and regime formation: on the development of institutions in international society. *International Organization*, 45(3), 281-308.