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GLOBAL ENVIRONMENTAL COMPLEXITY AND THE LIMITS OF THE EU'S EXTERNAL REGULATORY ACTORHOOD

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Introduction

A few decades ago, international actors were hopeful that they could avoid a global environmental crisis but now such a crisis is on its way. As recognised by the European Commission (2014), the Earth's climate change has an increasing number of impacts throughout the world, on our economies, our environment, our health and our daily lives. In response, on the international scene, the European Union (EU) has been very active in developing a wide range of policies that aim to foster sustainable development, both within the EU and externally. Internally, monitoring recent EU legislative activities enables us to put the spotlight on the Circular Economy Package and the Clean Energy Package as two landmark sets of proposals launched by the Juncker Commission, respectively in 2015 and in 2016, to guarantee sustainable development. The first piece of legislation aims at "helping European businesses and consumers to make the transition to a stronger and more circular economy where resources are used in a more sustainable way" and at contributing to "closing the loop" of product life cycles, from production and consumption to waste management, through greater recycling and reuse targets (European Commission 2015: 4). The second piece of legislation focuses on the energy transition as it seeks to increase energy efficiency, to achieve global leadership in renewable energies and to empower consumers on the energy markets. As Maroš Šefčovič, the European Commission Vice-President for the Energy Union, said: "proposals touch upon all clean energy related sectors: research and innovation, skills, buildings, industry, transport, digital, finance to name but a few" (European Commission 2016: 1). At the global level, the EU has been considered as a leader in environmental and climate change politics, assertively encouraging the adoption and signature of the Paris Agreement (Wurzel et al. 2017), especially since it "found itself catapulted into leadership after United States President George W. Bush declared that the US would not take part in the Kyoto protocol" (Behrens and Egenhofer 2011: 220). Without doubt, the EU is very active on environmental matters (Adelle et al. 2018a).

While the internal dimension of EU environmental policymaking is challenging, in particular with regard to its ambition and harmonisation needs between EU member states, the external dimension is even more problematic. Global environmental politics are faced with increasing global environmental complexity (see Box 8.1) which increases and diversifies the number of international interactions.

BOX 8.1 GLOBAL ENVIRONMENTAL COMPLEXITY

Current thinking in terms of unique international regimes is inadequate (Jordan and Huitema 2014). Indeed, global environmental politics has witnessed the development of institutional interactions, regime complexes and institutional fragmentation. Oran Young (1997) has been the first to identify interactions between environmental regimes, followed by Kal Raustiala and David Victor (2004), who identified regime complexes for the first time, subsequently joined by Orsini et al. (2013). More recently, Frank Biermann (Biermann et al. 2009) developed the concept of architectural fragmentation in global environmental governance. All of these research trends can be brought together under a common label: they study “global environmental complexity”. With regard to climate change, for instance, this builds on the observation that the idea of a single coherent regime is to be rejected to embrace the notion of a “regime complex for climate change”, which “emerged as a result of many choices ... at different times and on different specific issues” (Keohane and Victor 2011: 7).

First of all, there can be horizontal or vertical interactions, depending on the levels of policymaking at play. Horizontal interactions take place at the same level of policymaking and can involve different areas of issues. For instance, at the international level, both the World Intellectual Property Organization (WIPO) and the Convention on Biological Diversity (CBD) produce regulations on products derived from plant genetic resources. By contrast, vertical interactions take place at different levels of policymaking. The interactions between the World Trade Organization (WTO) norms and the EU ban on Genetically Modified Organisms (GMOs) in 1998 are a good illustration of this verticality. Second, interactions can be unintentional and appear because of the proliferation of international institutions, or intentional. The case of the regulation of GMOs has been delicate to solve due to the existence of, on the one hand, the precautionary principle recognised in EU law and, on the other hand, the WTO imperative about non-discrimination in relation to products. Interactions can be the result of strategic games. For instance, in 2004 Russia adopted the Kyoto Protocol in exchange for its accession to the WTO (Afionis and Chatzopoulos 2010; Henry and Sundstrom 2007). Third, interactions arise between actors of a very different nature: governments, regional organisations, international organisations, local authorities but also non-state actors from all categories, such as non-governmental organisations, companies, scientists or local and indigenous communities. For instance, new non-state climate actors and therefore actions are on the rise and are considered to have a considerable potential to mitigate climate change (Chan et al. 2015). They are now becoming involved in sustainability transitions at the international level, namely through transnational climate change governance (Bulkeley et al. 2018).

To cope with global environmental complexity, in recent years scholars have looked at global governance through the concept of polycentricity (see Box 8.2) in order to analyse this considerable rise in the number of interactions between a growing range of actors.

BOX 8.2 POLYCENTRICITY

In 2009, E. Ostrom was the first author to analyse governance from a polycentric perspective (Ostrom 2009). Essentially, polycentric governance reflects new forms of governance emerging “spontaneously from the bottom-up, producing a more dispersed and multilevel pattern of governing” (Jordan et al. 2018: 9; see also Ostrom 2010). They are taking place at different levels (local, regional, national, global) and in different sectors (transport, agriculture, building, energy supply and demand, etc.). This approach “claims that individual action and cooperation can be realised through a multitude of actors – in their specific contexts and in policy arenas where free-rider incentives are non-existent, less prevalent, or easier to overcome than has been perceived on the global level” (Dorsch and Flachsland 2017: 50).

Ostrom stressed that polycentricity makes it possible to highlight that not “only the largest scale” is relevant but that it can be complementary to small – and medium – scale actors and actions (Ostrom 2010). It differs from multilevel governance in the sense that it attributes a stronger degree of autonomy to sub- and non-state actors whereas multilevel governance usually assumes greater involvement of governmental actors in both the setting and implementation of policies (Wurzel et al. 2017). It also differs from other related concepts such as regime complexity, institutional fragmentation or political federalism in the way that “it is more directly concerned with the role of non-governmental units and/or situations in which jurisdictions overlap” (Jordan et al. 2018).

This chapter’s aim is to understand how and to what extent the EU navigates global environmental complexity by using polycentricity. For this purpose, it is divided into three parts. Part 1 presents the competences of the EU by looking at primary law and by considering the emergence of innovative, associated EU governance structures. Part 2 discusses the variety of instruments that the EU has been using to reach its external environmental objectives within a fragmented and complex world. Part 3 highlights to what extent the EU has been able to externalise its objectives. Theoretically, without denying the importance of traditional approaches in terms of EU leadership (Zito 2005), EU normative power (Falkner 2007) or EU ‘actorness’ (Delreux 2014), the chapter concentrates on an innovative and polycentric approach when looking at the EU’s external environmental politics. Given the multilateral, multi-actor, multilevel and multisite nature of today’s environmental challenges and policies, the concept of polycentricity offers relevant tools to look at new actors, new actions and new policy designs in a post-Paris Agreement period. At the same time, polycentricity does not replace supranationality but rather complements existing institutions at the supranational level.

EU external environmental competences: innovating to embrace polycentricity

The EU’s environmental policy has been developed in the course of the last five decades in parallel to environmental pressures: it has increased in quantity, in scope and in impact (Delreux and Happaerts 2016). The policy and the phenomenon have, moreover, become increasingly complex, not involving solely traditional environmental concerns (Delreux and Happaerts 2016) but affecting almost all sectors of the economy and all levels of political power. It is in this context that external environmental competences are not unilaterally controlled by one unique authority but are distributed among a considerable number of actors.

The objectives of the EU’s environmental policy derive from primary law. The EU treaties define the allocation of competences between the EU institutions and the EU member states as regards secondary law. In the early stages, the allocation of competences was very general: Article 3 of the Treaty on the European Union (TEU) states that the Union shall work for the sustainable development of Europe. In 2009, the Lisbon Treaty tried to introduce more details and coherence. Article 11 of the Treaty on the Functioning of the European Union (TFEU) added the so-called environmental policy integration (EPI) principle, defined as the act of “incorporating environmental concerns in sectoral policies outside the traditional environmental policy domain” (Runhaar et al. 2014: 233). Article 191 TFEU embodied the environmental competence of the EU (which included climate change) and Article 194 embodied the energy competence of the EU, which did not include climate change but was

obviously closely connected to it. Article 21 TEU also mentioned sustainable development as it formulated the main guidelines for action of the Union on the international stage.

In past decades, the international stage has been considered as a key arena through which to tackle environmental issues, populated by “international treaties that are concluded by multiple parties and that primarily deal with transboundary environmental affairs” (Delreux 2018: 19). Without doubt, international multilateralism remains central for global environmental governance (Dorsch and Flachslund 2017). Following the adoption of these treaties, the EU developed a procedure laid down in Article 218 TFEU, according to which the Union can participate, as a party, to the building of these agreements. Ultimately, the Council remains the institution that authorises the signing of any agreement but this procedure means that both the EU and EU member states are parties to international environmental agreements and negotiate these agreements at the same time.

Although this institutional framework allowing the EU to negotiate and take part in agreements has been set up, the first attempts to organise an EU delegation to international environmental agreements following the Lisbon Treaty are known to have been difficult. A landmark illustration of this was the 2009 Copenhagen climate change summit, where the EU delegation was found to be disorganised and lacking responsiveness, with too many officials and levels involved and clear opposition within and between EU delegates. Learning from this failure, since then the EU has set up a very sophisticated organisational structure for its delegation to guarantee more coherence and responsiveness. More precisely, in the current international climate change negotiations, the EU delegation is now clearly organised around different sub-groups, each specialising in specific tasks:

“The EU team comprises the lead negotiators, the track coordinators and the issue leads. In the negotiation process on the Paris Agreement, three lead negotiators (from Germany, the United Kingdom and the European Commission) negotiated on behalf of the EU each for a particular set of issues. They were senior and experienced negotiators, who – together with a coordinator (from the European Commission) – formed the core group within the EU team, which had a complete overview on the negotiations”. (Delreux 2018: 30)

The lead negotiators therefore take all the important decisions while the track coordinators are entitled to follow the overall evolution of the negotiations closely and to monitor EU member states and third-party advocacy positions.

While these provisions concern the organisation of the EU delegation within the framework of one international treaty in particular, the climate change convention is no longer negotiated under one unique convention. On top of the complexity that arises from the EU’s allocation of competences, one has to add the proliferation of international institutions that cover a wide range of issue areas in order to gain a complete understanding of “who does what” in global environmental governance. These international institutions have now created what is described as ‘regime complexes’ (see Box 8.1). More than that, within those regimes, new actors such as non-state actors may be found (Orsini and Godet 2018). Indeed, when it comes to environmental policy, it is clear that it is not only the United Nations, EU and national levels that are concerned. Numerous sub- and non-state actors are increasingly active in the expanding environmental sphere. These actors include cities, regions, businesses and civil society organisations (Chan et al. 2015).

In a nutshell, polycentricity explains that the environmental competence has to be understood in a broader way than it has been in past decades. Interactions between different issue areas

are increasing. Environmental issues have always been and continue to be linked to trade issues. This is clear, for instance, in the domain of international regulations on biofuels (Orsini and Godet 2018). Climate change issues are increasingly linked to energy issues, for which the players involved are very different. Recent research shows that the EU is increasingly aware of institutional interactions and adopts, when possible, a division of labour strategy among its different units to ensure coherence and consistency across sectors and levels. For example, on access to genetic resources derived from biodiversity, international negotiations take place in very different settings, including the CBD, the WTO and the WIPO. The EU sends negotiators from the European Commission's Directorate General (DG) Trade to the WTO, from DG Environment to the CBD and from DG Internal Market to the WIPO. While the delegates sent are different, they communicate during numerous inter-coordination meetings to build a coherent EU strategy (Morin and Orsini 2014).

Finally, the rise of new actors demonstrates that the legislative environmental shared competence may well be in the hands of the EU and its member states but that the practical capacity to speed up the transition towards sustainability remains in the hands of any of these actors and at any level. The EU is therefore partnering with numerous non-state actors.

The EU instruments being used to navigate complex global environmental waters: diversifying policy approaches and scales

The EU has a variety of instruments at its disposal to advance its agenda in terms of meeting the objectives – enshrined in its Treaties – on the international scene. These instruments have different policy approaches. Some are situated at the international level of policymaking while others are to be found in EU secondary law. In recent years, scholars have studied those instruments in depth (see Delreux and Happaerts 2016; Adelle et al. 2018a). However, the opportunity or challenges that a polycentric system characterised by global environmental complexity may bring to the EU for it to disseminate its instruments and values is less developed in the literature.

With regard to regulatory instruments, multilateral environmental agreements are key for the EU to promote the inclusion of strong environmental measures at the international level (Delreux 2018). The EU has been a strong supporter of the Paris Agreement but also of many other international environmental agreements, including the recent Minamata Convention on Mercury adopted in 2013, which entered into force in 2017 and which includes strong provisions to lead a phase-out of the use of mercury (Andresen et al. 2013). Among other things, the convention includes

a ban on new mercury mines, the phase-out of existing ones, the phase out and phase down of mercury use in a number of products and processes, control measures on emissions to air and on releases to land and water, and the regulation of the informal sector of artisanal and small-scale gold mining.¹

Overall, the EU is a successful player in uploading its preferences to international environmental agreements: “In other words, there is a strong correlation between the EU's preference and the international treaty if and when a multilateral environmental agreement is actually reached” (Delreux 2018: 32).

Regulatory instruments are also often used internally, for example where the EU uses binding regulations such as directives when it is well advanced on one particular environmental issue. While these are internal regulations, they produce externalities that have an impact on third (i.e. non-EU) countries. One example is the Registration, Evaluation, Authorisation and

Restriction of Chemicals (REACH) regulation, which requires that all new chemical components that are to be used within the EU pass an approval procedure. REACH therefore has an impact on chemical producers worldwide, creating diffusion effects whereby other government actors are inclined to adopt similar measures. Another example is the Forest Law Enforcement, Governance and Trade (FLEGT) Regulation, which aims at fighting illegal logging practices in third countries. Imported wood has to be certified before entering the EU market (Dlamini and Montouroy 2017).

With regard to the incentivising policy approach, the case of the 2005 EU Emission Trading System (EU-ETS) is often presented as an internal policy deliberately designed to have extraterritorial effects (Afionis 2011). Regardless of the effectiveness of this market-based instrument, it is clear that it has had effects on the international scene since its establishment in the early 2000s with the 2003/87 and 2004/101 directives. The construction of the EU-ETS is a marker of cognitive leadership, both internally and externally, as the EU was able to take the lead by being the first to design such an instrument (Skjærseth 2017). The ETS system is compatible with the Paris Agreement implementation mechanism and several states and regions have already taken inspiration from the EU to develop similar mechanisms.² The development of global market-based mechanisms to control emissions is so successful that it is now envisaged in the aviation sector (Schunz 2019).

With regard to the service policy approach, development and cooperation policies offer another key instrument for the EU to externalise its preferences as environmental and climate adaptation policies are progressively mainstreamed into development activities (De Roeck et al. 2018).³ The concept of 'mainstreaming' differs from the Article 11 TFEU Environmental Policy Integration (EPI) principle presented above as it goes one step further. Gupta explains that "mainstreaming implies climate change becoming the overriding objective" while integration refers to an "add-on, end of pipe solution" (Gupta 2010: 70).

Finally, persuasive instruments are also being developed by the EU, which has taken an active role in the new "governing through goals" paradigm (Kanie and Biermann 2017). For instance, the EU has crafted a 2020 biodiversity strategy aiming at, among other things, having international effects to curb illegal wildlife trade and mobilise resources for biodiversity conservation in third countries. In parallel to governmental institutions, European non-state actors have also been very active in terms of persuasive instruments seeking transformative actions leading to a low-carbon society. In general, these actors foster persuasive and voluntary mechanisms such as policy innovation, dissemination of best practices, facilitation of international cooperation and development of climate action norms (Chan et al. 2015).

The EU institutions have started to look at non-state actors as an opportunity to create new and complementary synergies given that linking the EU's external policy actorness with non-state actors can help maximise the benefits of both approaches (Chan et al. 2015). The role of the EU can be to 'orchestrate' non-state actions by "strategically deploying a wide range of measures to steer non-state and subnational initiatives towards public goals and to assist them" (Chan et al. 2015: 3). According to Abbott et al. (2015), international organisations turn to orchestration to reassert their role and to steer global governance towards internationally agreed on goals and principles. The Covenant of Mayors brings together some characteristics of such an orchestration policy. It was launched by the European Commission as a result of the adoption of the EU climate and energy package in 2008 and was given a new lease of life in 2015 by the Juncker Commission. It aims at sharing a vision for a sustainable future and calls for the delivery of concrete and long-term measures at the local level. It is presented as a unique bottom-up movement (Covenant of Mayors 2016a), calling on civil society and other

stakeholders to become “active players in the energy transition” (Covenant of Mayors 2016b: 4). This voluntary instrument actually creates direct links between the EU and local-level actors (i.e. cities) while it fosters polycentricity within the EU. It has been so successful that, over time, it has achieved international reach. The fact is that the Covenant of Mayors was first organised at the EU level but has become global since then and has been known as the Global Covenant of Mayors since 2017. This example illustrates the externalisation of EU environmental norms and values through persuasion and with the support of non-state actors. By acting in this way, the EU, namely the European Commission, continues to be the driving force behind the development of climate policies by attracting attention, inventing policy options, framing solutions, mobilising support, linking policies and therefore providing the supranational level of the EU with a new dimension (Skjærseth 2017). In this case, the concept of polycentricity helps to highlight the complementarity between supranational actors such as the European Commission and local authorities. Indeed, overarching rules from the European Commission, such as via the Covenant of Mayors, are one of the key features of polycentricity. For local actors, they can be a source of change as well as a source of continuity with existing institutions (Jordan et al. 2018).

As these developments demonstrate, the EU has been very flexible with regard to the use of instruments. Constantly adapting to its broader environment is probably what best characterises European choices against the backdrop of global environmental complexity.

The European Union’s impact on global environmental complexity

While the EU’s competences and instruments have become increasingly sophisticated to cope with complexity, a more nuanced picture emerges with regard to its impact on global environmental politics.

In terms of long-term objectives, scholars do not seem to agree on the role that the EU has taken on as we move towards 2020. While many have highlighted the environmental leadership of the EU, others state that this same leadership is now stagnating (Oberthür and Dupont 2018). This assessment is illustrated clearly if one looks at international climate change politics.

On the one hand, the EU has been successful in influencing international climate change politics strategically and normatively. In 2004, the successful strategic idea to use the WTO as a trade-off for Russia’s accession to the Kyoto Protocol was a European initiative (Afionis and Chatzopoulos 2010; Henry and Sundstrom 2007). Subsequently, the proposal to concentrate on a 2°C limit target, whereby states would avoid global warming of the atmosphere of more than 2°C compared to 1880, is a European norm that gradually convinced other players, including major CO₂ emitters such as China (Gippner 2016).

On the other hand, since the adoption of the 2030 climate and energy package in October 2014, the EU has internally evolved towards a more diversified and re-nationalised landscape, marked by the increasing power of the European Council (Skjærseth 2017) and by the emergence of a ‘polonisation’ of EU energy and climate policy as Visegrad Group countries seem reluctant to develop more ambitious and legally binding targets at the EU level (Ancygier 2013; Skjærseth 2017). This moment has been identified as a “shift from a transformational leadership to a more transactional leadership style” (Skjærseth 2017: 46). Transformative leadership aims at bringing about profound change and pursuing long-term objectives (Wurzel et al. 2017) whilst transactional leadership adjusts to external circumstances and focuses on short-term goals (Burns 2003). Such an internal division is leading to an increase in power for

the Council marked by intergovernmentalism at the expense of EU supranationalism whereby the EU could speak with one voice at the international level.

The difficulty in assessing the EU's impact is related to the fact that it sometimes presents a Janus-type two-faced position when faced with global environmental complexity. This is the case, for instance, for international politics relating to biofuels. On the one hand, the EU does not want biofuels to be recognised as environmental goods at the WTO (they are now recognised as agricultural or industrial goods) as environmental goods cannot be subsidised, compared to agricultural or industrial goods. However, so far, the EU has been promoting biofuels as an environmental solution within its own internal programme in order to reach its climate change and energy targets. Biofuels are considered as a green alternative internally, but not at the international level, to avoid competition with emerging countries' biofuels and because recent doubts have been expressed concerning the actual potential of biofuels to be used as a green energy source (Orsini and Godet 2018). Another example relates to solar energy. While the EU, considering its ambitious plan to phase out fossil fuels, should welcome the worldwide development and use of solar panels, it has entered a trade war against China on this specific issue, in the name of European industrial interests (Caprotti 2015).

Aside from the debate on the leadership position of the EU at the international level, one may also wonder about the extent to which EU rules, values, preferences and practices should actually be exported, regardless of the instrument and of the validity of the approach. Again, the biofuels case is illustrative as the EU has been promoting biofuels internally and externally before realising that, externally, their production was creating considerable environmental damage in third countries. The case of Mozambique can be used to look at complexity in the field. In Mozambique, the EU has been lacking a comprehensive strategy that pays attention to long-term effects and third-country needs (Schunz 2019). Schunz argues that the instruments used by the EU have been those of a plan and not a strategy. They have been based on short-term cause-effect assumptions related to the attractiveness of its model, creating the illusion of certainty on a set of issues that are highly dynamic in a global context that is anything but stable (...) The technical, problem-solving attitude, suited for an already stabilised and strongly legalised intra-EU context, regularly does not match the strategic demands of the ever more intricate global context that the EU's foreign policy is faced with (...) It is this desire to reproduce, on a global scale, the type of certainty that the Union's internal legal regime is supposed to foster that explains the EU's long-standing preference for planning over strategy.

(Schunz 2019: 350–351)

In Mozambique, this plan has led to biofuels' projects causing serious negative land-use changes. Such "projects in conjunction with other activities such as mining, forestry, and tourism further exacerbate competition for land, water and other resources" (Di Lucia 2017: 279).

This shows the unintended impacts that an EU internal environmental policy may have when applied externally and the need to better coordinate energy, trade, environment and development policies both internally and externally to reach sustainable biofuel production (Di Lucia 2017). This lack of coordination echoes the absence of mainstreaming commitment in EU external policy, which functions with limited staff and faces major cognitive barriers (De Roeck et al. 2018: 40). One way to solve the problem would be to foster multisectoral mainstreaming efforts in all external policies and at every step of the policy cycle, especially

at the implementation level where tools need to be further developed to soften negative interactions (De Roeck et al. 2018: 38–39).

Non-state actors might actually be key in articulating the cognitive needs that EU delegations sometimes miss and in helping to address heterogeneous site-specific conditions (Dorsch and Flachslund 2017). The Paris Agreement, of which the EU was a strong supporter, is evidence that “the UN climate regime is evolving from a global deal model, in which countries negotiate emission targets, to a ‘pledge-and-review’ model, in which each country defines its own goals, subject to some form of intergovernmental review” (Chan et al. 2015: 4). Non-state actions are a key pillar of this agreement as they are expected to complement and support the multilateral process (Chan et al. 2015). At the same time, decentralised experimentation can be disseminated in order to foster mutual learning and ultimately enhance cooperation at several policy levels (Dorsch and Flachslund 2017). Both the United Nations (UN) and the EU could create frameworks for these exchanges with non-state actors to take place and provide an enabling context conducive to trust-building between non-state actors (Dorsch and Flachslund 2017: 57). The NAZCA global climate action portal launched at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties 20 in Lima is a tool developed by the UN that draws together data from different registries about non-state climate actions and commitments in order to inform public authorities about the ongoing orchestration of non-state initiatives (Chan et al. 2015). Research is ongoing on these new forms of ‘orchestration policies’ supported by the EU, which are not traditional policies but which support the role of supranational institutions and could help the EU gain legitimacy and coherence in the face of global environmental complexity.

Conclusion

The EU has adopted a rich and diverse set of competences, instruments and impacts with regard to global environmental complexity. In terms of competences, the EU and its member states have managed to develop a strong environmental policy to support a relatively ambitious environmental agenda both internally and externally. The concept of polycentricity shows that the capacity to speed up the transition towards sustainability not only lies in the hands of legislative actors but also lies in the hands of any of the actors and at any level.

In terms of instruments, in order to advance its environmental agenda, the EU has a wide variety of approaches at its disposal: regulatory incentivising, service or persuasion. With regard to instruments, the concept of polycentricity gives an insight into how the EU may strategically orchestrate non-state actors to help maximise benefits that may arise from its actions, thereby shedding light on the adaptive capacity of the EU and the potential of non-state actors.

In terms of impacts, the EU faces considerable normative complexity. It is still considered as a normative power as it continues to influence many international environmental policies but its environmental leadership is, over time, stagnating (Oberthür and Dupont 2018). Indeed, internal divisions between environmentally progressive and more reluctant actors as much as the latest trend towards renationalisation observed in the EU has led to a preference for intergovernmentalism at the expense of a stronger supranational EU. In parallel, some EU policies have had unintended impacts, as the case of biofuels has shown (Di Lucia 2017). Again, the concept of polycentricity brings a new element to this debate as it highlights how new non-state actors might be key in coming up with solutions to soften such unintended impacts and in creating new synergies. More than that, polycentric forms of governance such as those

established within the EU and now in the Global Covenant of Mayors seem to create new channels for the dissemination of EU norms and preferences. However, future research needs to be conducted in order to evaluate the costs and benefits of polycentric initiatives as much as the impacts of the (EU) policies that orchestrate their actions.

The flexibility of the EU means that it is an adaptive player that rather easily navigates the difficult waters of global environmental complexity and polycentricity. This chapter has provided evidence that supranational actors may have carved out for themselves a complementary role in a post-Paris Agreement landscape that favours polycentricity. In this sense, polycentricity and supranationalism seem to operate as complementary rather than competing forms of governance. However, the EU's external environmental action is rather an exception to the rule. Other international players, notably emerging countries and the United States, are adopting different and less flexible positions.

Notes

1 Convention website.

2 See the *Global Environmental Politics* special issue, Volume 17, Issue 3, August 2017 on a "Global Turn to Greenhouse Gas Emissions Trading? Experiments, Actors, and Diffusion".

3 See De Roeck et al. 2018 and Adelle et al. 2018b for in-depth analyses of the integration of the environment in development and cooperation policy.

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