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ORIGINAL PAPER

Exploring national and regional orchestration of nonstate action for a < 1.5 °C world

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Abstract The importance of actions by non-state and sub-national actors (e.g., companies and cities) is increasingly recognized, because current governmental commitments are insufficient to limit the increase of global temperatures to 1.5 °C. Orchestration, the alignment between 'orchestrator' (e.g., international organizations and governments) and 'intermediaries' (e.g., city networks and partnerships), could harness additional contributions by building catalytic linkages and by enabling a growing number of actions. Although most orchestration efforts have been made in the context of international climate negotiations, regional and national orchestration could be useful by contributing to the implementation of national commitments, and by inspiring greater ambition. We investigate whether and how regional and national orchestrators respond to shortfalls in international orchestration. Using insights from a comparative study, we provide an early indication of the catalytic potential of orchestration in Latin America, Europe, India, Argentina, and Sweden. We find considerable impacts of global level orchestration on the emergence of these initiatives, however orchestrators do not simply copy other efforts; they emphasize different catalytic linkages, including the engagement of underrepresented actors; implementation; and, the provision of ideational and material support. Catalytic linkages in a complex landscape with multiple orchestrators could sometimes be improved through

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coordination. Given the enormous scale of transformation needed, a focus on scale may seem natural. However, for socially just outcomes, orchestrators need to resist a sole focus on scale, and also aim at experimental and small-scale actions, which may not lead to immediate large-scale impacts but which may prove crucial in longer-term transformations.

 $\textbf{Keywords} \ \ \text{Orchestration} \cdot \ \ \text{Governance} \cdot \ \ \text{Climate change} \cdot \ \ \text{UNFCCC} \cdot \ \ \text{Non-state}$

Abbreviations

AWD Latin American Access to Water Declaration C21F French Committee for Sustainable Development

CBS Council for Business Sustainability
COFEMA Federal Council for the Environment

COP Conference of the Parties

CoR European Committee of the Regions EESC European Economic and Social Council

FS Fossil Free Sweden

GCAA Global Climate Action Agenda

GHG Greenhouse gas

ICGC International Climate Governance Coalition

LPAA Lima-Paris Action Agenda

MPGCA Marrakech Partnership for Global Climate Action

NAZCA Non-state Actor Zone for Climate Actions

NCCC National Climate Change Cabinet NDC National determined contributions NGO Non-governmental organization

OECD Organization for Economic Co-operation and Development

R&D Research and development

RAMCC Argentinean Network of Municipalities in face of Climate Change

SMEs Small- and Medium-sized Enterprises
TERI Energy and Resources Institute
UNCS 2014 UN Climate Summit

UNFCCC United Nations Framework Convention on Climate Change

1 Introduction

This article is part of a special issue on achieving 1.5C and climate justice, and focuses on how national and regional orchestration of climate action can address the limitations of international attempts to orchestrate non-state and sub-national actors, most notably the Global Climate Action Agenda, by enhancing catalytic linkages.

If all government commitments ['nationally determined contributions' (NDCs)] under the United Nations Framework Convention on Climate Change (UNFCCC) would be implemented, it would result in an estimated 2.6–3.1 °C warming by the end of this century (Rogelj et al. 2016). The limited ability of governments to deliver on the 1.5 °C target has prompted the advancement of ideas to leverage societal potential to reduce



greenhouse gas (GHG) emissions and to address climate change impacts, for example by mobilizing actions by non-state (e.g., companies and investors) and sub-national (e.g., cities and regions) actors (Chan and Pauw 2014; Chan et al. 2015; Hale and Roger 2014; Widerberg 2017).

Climate actions by non-state and sub-national actors are increasingly recognized under the United Nations Framework Convention on Climate Change (UNFCCC) (Hale 2016). The 'Global Climate Action Agenda' (GCAA), in particular, recognizes and mobilizes non-state climate action for 'Enhanced action prior to 2020' (Chan et al. 2016) and for facilitating lower emission pathways that are compatible with the 1.5 °C target.

The GCAA is an example of 'orchestration' at the international level. It involves an indirect mode of governance where an 'orchestrator' (e.g., the UNFCCC secretariat and representatives of COP presidencies) aims to steer 'target groups' (non-state and subnational actors) via 'intermediaries' (Abbott et al. 2015). Intermediaries could, for instance, be partnerships and sectoral networks. Orchestrators draw on intermediaries' expertise; harness commitments; broaden 'on-the-ground' ownership and support for shared objectives; and allow for external monitoring of progress and compliance (Abbott et al. 2015). In the context of climate change, orchestration could help to accelerate mitigation and support the long-term goals of the Paris Agreement (Climate Action Tracker 2016; UNEP 2015). Orchestration could also help to draw attention to social justice in a climate governance landscape that has long been focussed on (large-scale) mitigation actions (also see Sect. 2). For instance, orchestration targeting non-state actors in developing countries could help to redress imbalances between the global North and South, and address long-standing concerns over the underrepresentation of stakeholders based in developing countries. Conversely, orchestration that only focuses on large (Northbased) corporations could aggravate imbalances in climate governance; for instance, by emphasizing mitigation potential while eschewing responsibilities for, and risks of, already occurring detrimental impacts of climate change in developing countries.

While the GCAA connects non-state and sub-national actors to the UNFCCC process, orchestration also takes place at the national and regional level. This article focuses on emerging instances of orchestration at the national and regional level, further theorizing about their impacts and providing illustrative empirical examples. We focus on what Betsill and colleagues (2015) call 'catalytic linkages' between different elements in the climate governance landscape. Such linkages are generally informal, enabling a growing number of actions that 'reduce emissions, [and] engage in other concrete actions that might address underlying drivers of emissions, shape investment in low-carbon development, and build climate resilience' (Betsill et al. 2015: 5–6). 'Catalytic linkages' could be juxtaposed to 'division of labour linkages' that focus on formal institutional coordination, primarily between international organizations and institutions dealing with different climate change-related tasks (Betsill et al. 2015: 4).

The article raises two questions in particular. First, what does current international orchestration of climate action achieve in terms of building catalytic linkages, and where does it fall short to deliver on the goals of the Paris Agreement? Second, to what extent and how are local and regional orchestration initiatives inspired by international orchestration, and do they respond by creating additional catalytic linkages to support the implementation of the Paris Agreement? We argue that there are two types of catalytic linkages (see Fig. 1). First, orchestration is defined by the aim to build direct catalytic linkages which occur when orchestrators enlist intermediaries, who in turn target more actors. Indirect catalytic linkages concern the influence beyond the original programmatic orchestration, for instance, when orchestrators mimic or adjust mobilization efforts in response to other



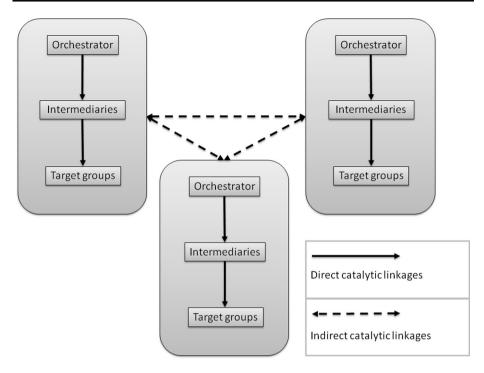


Fig. 1 Direct and indirect catalytic linkages

orchestrators; when orchestrators encourage participation in other orchestration efforts than their own; and, when actors in other locations, levels of governance, and issues, are inspired to become orchestrators themselves.

National and regional orchestration can be an opportunity to elicit additional contributions for implementing the Paris Agreement. Multiple orchestrators in a complex governance landscape do not necessarily compete with one another, or duplicate each other's efforts, for instance, by drawing on comparative advantages. Multiple orchestrators could even improve the overall quality of governance, by reinforcing each other's efforts, and promoting climate action as a norm across different governance contexts. Assessing whether and how multiple orchestrators improve governance is inherently normative: what should multiple orchestrators in governance achieve, and what should be expected from multiple orchestrators?

Methodologically, this article presents a comparative case study, between catalytic linkages in national and regional orchestration efforts and their relation to the GCAA. We assess whether orchestrators improve catalytic linkages in governance by (1) engaging new and underrepresented actors; (2) contributing to the implementation of NDCs; (3) emphasizing the 1.5 °C target and associated concerns over social justice and equity; and/ or (4) providing ideational and material support. We use five cases of orchestration at the regional (Latin America and Europe) and national (India, Argentina and Sweden) levels, to discuss whether and how they have been influenced by the GCAA, and whether and how they improve catalytic linkages vis-à-vis the GCAA. The case selection represents diversity at the national and regional levels, including initiatives at different stages of development, at different scales, and addressing functions that are relevant to our



suggested appraisal of catalytic linkages. The recent nature of most cases limits empirical research on their effects. This article provides a first step toward identifying indirect catalytic linkages between the GCAA and national and regional orchestration initiatives. Moreover, as new orchestrators are defining their operations, their focus areas, and target groups, they provide early indications of their catalytic potential, and their possible contributions in a complex landscape with multiple orchestrators. The research uses empirical observations, and qualitative data (from websites, reports, and online platforms), supported by insights gained from semi-structured interviews with representatives of orchestration initiatives.

The next section describes the GCAA and how national and regional orchestration initiatives can support global climate governance through catalytic linking. Subsequently, five national and regional orchestration initiatives are analyzed. The final section discusses findings and the role of orchestration in realizing a resilient and safer < 1.5 °C world.

2 The Global Climate Action Agenda

This section describes and identifies limitations of the GCAA which national and regional orchestration initiatives could help address.

2.1 The GCAA and direct catalytic linkages

The GCAA comprises of successive activities that could be considered a programmatic continuation of an evolving orchestration effort (Widerberg 2017). The GCAA mobilizes non-state actors in the context of the UNFCCC for mitigation and adaptation to climate change, either individually or in cooperation with other actors. Even when different orchestrators led subsequent activities, they collaborated among themselves; built on each other's efforts, and recognized each other's initiatives. The GCAA facilitates direct catalytic linking between different elements in the climate governance landscape by mobilizing new initiatives, and entering into collaborations with, e.g., city and business networks (see Climate Action Tracker 2016; Galvanizing the Groundswell of Climate Actions 2015; Chan et al. 2018; Hale 2016; Jacobs 2016). It is, therefore, worth noting that the GCAA combines multiple governance modes, including orchestration and collaboration.

The GCAA's direct catalytic linkages seem quite substantial. First, the then Secretary General Ban Ki-moon convened 'world leaders, from government, finance and civil society' at the UN Climate Summit (UNCS) in New York in 2014, for building momentum toward the Paris Climate Conference. During the UNCS, over 50 initiatives were launched, engaging a multiplicity of actors alongside governments (Chan et al. 2015, 2018). The subsequent 'Lima-Paris Action Agenda' (LPAA) had a similar goal and was launched during COP20 (December 2014, Lima, Peru) by the governments of Peru and France. The LPAA mobilized 70 initiatives, involving over 10,000 actors by the time of the 2015 Paris Conference (Galvanizing the Groundswell of Climate Actions 2015). At COP20, the Peruvian government, in cooperation with the UNFCCC Secretariat, also launched the Non-state Actor Zone for Climate Actions (NAZCA), a platform for recording climate commitments. In 2014, NAZCA recorded over 900 commitments, after the 2015 Paris Conference it recorded 10,800 actions, and by the 2016 Marrakesh COP that number reached 12,500. After the Paris Conference, activities continued under the 'Marrakech



Partnership for Global Climate Action' (MPGCA). The direct catalytic effects of the MPGCA remain to be seen. However, post-Paris orchestration is strengthened institutionally by the Paris COP's decision to install two 'High-Level Climate Action Champions' with overlapping terms to provide leadership in mobilization, and to organize high-level climate action events (Chan et al. 2016).

The GCAA's effects are not limited to direct catalytic linkages. Mobilizing powerful economic players helped to create a 'positive' narrative, combining economic growth and climate actions; putting pressure on governments for an ambitious agreement (Jacobs 2016). Moreover, actors that are not intermediaries or formally recognized under the GCAA were inspired to set up their own platforms to elicit new climate actions. To what extent do these new initiatives reinforce and complement the GCAA? The following section outlines the limitations of the GCAA to understand how regional and national orchestrators could play complementary roles.

2.2 Current limitations to the GCAA

The GCAA cannot be understood separately from the UNFCCC process. It takes place around, and in preparation of, large intergovernmental climate conferences, aiming to reinforce linkages between non-state actions and the intergovernmental regime. This context places limits on GCAA orchestration, which should not be understood as weaknesses. The GCAA cannot cover all possible governance functions or actors; it needs to set priorities. We highlight four limitations: the focus on large-scale and economically powerful actors; a lack of focus on implementation; weak linkages with the 1.5 °C target and social justice concerns; and limited provision of material and ideational support.

First, the GCAA emphasizes actions with high mitigation potential, involving large businesses, cities, and economically powerful regions. Smaller-scale, perhaps more experimental, initiatives, involving small and medium enterprises (SMEs), or smaller cities, regions and communities are underrepresented (Galvanizing the Groundswell of Climate Actions 2015). However, smaller actors are crucial for any economic transformation. Formal SMEs, for instance, make up 60% of employment and 40% of national income in emerging economies, and even more in other developing countries. According to a recent study, actions launched at the UNCS were mostly led by North-based actors; and were more likely to be implemented in wealthier countries (Chan et al. 2018). Developing country based orchestrators could play an important role in the orchestration of smaller-scale actions; strengthening catalytic linkages through the engagement of underrepresented actors (Dooley and Kartha 2017).

Second, most efforts under the GCAA were taken on the way toward a new agreement (Chan et al. 2016). Consequently, the question of how non-state actions contribute to implementation—in particular of NDCs—has gained less attention. Although the post-Paris MPGCA and the high-level climate action champions could change the focus toward implementation, national and regional level orchestrators are in a better position to orchestrate toward implementation as they are more familiar with national and regional implementation.

Third, since the GCAA predates the Paris Agreement, it has not specifically focused on 1.5 °C as a target. Arguably, from a mitigation perspective an explicit reference by orchestrators to 1.5 °C as a target may not be necessary, as most efforts are already focused on mitigation. For instance, NAZCA includes more than 9000 mitigation actions and less

http://www.worldbank.org/en/topic/financialsector/brief/smes-finance, accessed 30 September 2017.



than 1000 address adaptation and resilience. However, the 1.5 °C target is not only a mitigation target; it is closely associated with concerns over social justice. The inclusion of the 1.5 °C target in the Paris Agreement happened in the context of small island developing states and least developed countries drawing attention to social injustice (Okereke and Coventry 2016). Even if the world succeeds at limiting global warming to 1.5 °C, already occurring impacts still disproportionately affect vulnerable communities in developing countries (African Development Bank et al. 2003; Carleton and Hsiang 2016). In a complex governance landscape, regional and national orchestrators could focus on social justice concerns that gave rise to the 1.5 °C target.

Finally, the GCAA focuses on mobilizing *commitments* to action that have a large *potential* impact on GHG emissions (Blok et al. 2012; Graichen et al. 2016; Harrison et al. 2014; Hsu et al. 2015; Roelfsema et al. 2015; UNEP 2015; Widerberg and Pattberg 2015). However, the support for successfully implementing commitments is limited. NAZCA provides a repository of cases; however, the GCAA's mandate and budget are insufficient to effectively facilitate learning (for more on orchestration and learning, see: Abbott 2017), or to provide material support (Chan et al. 2016). Consequently, regional and national orchestrators could aim at providing such support as they may be better positioned to understand and address challenges and opportunities among regional and local actors.

The following section discusses five regional and national initiatives and considers their potential to enhance catalytic linkages vis-a-vis the GCAA.

3 Local and regional orchestration: exploring catalytic linkages with the GCAA

This section discusses whether regional and national instances of orchestration (1) bring on board underrepresented actors; (2) contribute to implementation; (3) emphasize social justice; and, (4) strengthen actions by providing ideational and material support.

3.1 International Climate Governance Coalition

The International Climate Governance Coalition (ICGC) describes itself as a 'transversal coalition' aiming to produce policy tools and recommendations to support bottom-up actions. 'Transversality' refers to the multi-level and multi-stakeholder character of climate governance. The ICGC's origins can be traced to orchestration efforts in the context of the UNFCCC, as it is a spin-off of efforts by the French government to mobilize stakeholders ahead of the Paris Climate Conference. The ICGC has the ambition to become itself an orchestrator by setting up a platform, and by targeting regions, businesses and workers organizations through its partner organizations. After an initial meeting at the World Summit Climate and Territories in July 2015 in Lyon, organized by the French COP Presidency, the European Economic and Social Council (EESC), the European Committee of the Regions (CoR), the French Committee for Sustainable Development (C21F), and the Organization for Economic Co-operation and Development (OECD) continued to explore ways to support non-state action, and together formed the ICGC in 2016.

The ICGC's catalytic impacts beyond the GCAA still largely need to be determined. Although the ICGC considers itself as 'centered on a northern approach,' mostly targeting Europe, and to a lesser extent Quebec, it aims to include developing country partners over

https://www.climatechance2016.com/uploads/media/57e52f85acb98.pdf, accessed 12 May 2017.



time. In terms of bringing on board new actors, ICGC has considerable potential as most of its partners do not represent traditional environmental actors. For instance, EESC traditionally represents the interests of employers and workers rather than the environment. By bringing unions and employer organizations into dialogues, e.g., with the European Commission, and by stimulating actions among these organizations, the ICGC potentially can promote climate action as a norm across various economic sectors.

The ICGC's focus is on smaller-scale initiatives that could make concrete contributions to NDC implementation. According to its 2016-2018 Draft Roadmap,³ the coalition 'seeks to make a concrete contribution to [...] a rapid implementation of the Paris Agreement.' However, the link between the ICGC's planned activities and NDC implementation remains obscure. According to the EESC, the coalition could insert 'field level value' into the conversation along with 'traditional structures,' particularly the European Commission, which often takes a macro-political view, rather than focusing on smaller initiatives.

The ICGC's Draft Roadmap does not explicitly refer to the 1.5 or 2 °C climate targets. According to Noelani Dubeta, coordinator of the coalition at the EESC, the coalition takes these goals on board as it operates in the spirit of the Paris Agreement. As its primary aim is to support initiatives, ICGC sees no need to do the 'number crunching' toward long-term targets. However, the ICGC sees an opportunity to address social justice concerns that gave rise to the 1.5 °C target. According to Dubeta, climate justice in climate negotiations is often construed as a North–South issue; by preparing an opinion on climate justice for the European Commission, the EESC seeks to reframe climate justice as a regional concern, for instance by pointing out the need to consider uneven impacts of climate change within the European Union.

According to the ICGC, its most important contribution is to provide ideational support for non-state actors to take action. It wants to produce a toolkit for organizations that wish to engage in climate action. The toolkit remains to be produced and its effects remain to be proven. However, in a case which could perhaps be called 'reverse orchestration,' the ICGC's most immediate effect seems to be the mobilization of its own partner organizations which are not traditionally concerned with environment and climate change. The OECD is taking steps to inquire about research needs among its member states, which should lead to studies that would underpin the ICGC's learning functions. C21F is reviewing its existing sustainable development toolkit, to inform the development of a similar toolkit for climate action. Within the EESC, the traditionally weaker 'various interests group' has seized on climate action as an opportunity to strengthen its position vis-à-vis the two main groups: workers and employers. Despite growing commitment from the partnering organizations, the ICGC faces a lack of capacity and funding. The ICGC's coordination relies heavily on voluntary efforts, for instance by interns. Questions could also be raised about the sufficiency of the ICGC's main product, a toolkit for accelerating climate actions. However, the ICGC is illustrative of the indirect catalytic impacts of the GCAA. The GCAA has had a structuring effect on the work of the ICGC, providing opportunities for extending networks, and to launch activities. For instance, the ICGC used side events at COP22 to convene prospective partners; and, it used the 2016 Climate Chance World Summit for Non-State Actors in Nantes to launch the initiative.

⁴ Thanks to an anonymous reviewer for the concept of reverse orchestration.



³ https://www.climatechance2016.com/uploads/media/57e52f85acb98.pdf.

3.2 ActionLAC

ActionLAC is a partnership set up by the Latin American foundation Fundación Avina and acts as a regional mechanism to accelerate actions and strengthen ambition and NDC implementation in Latin America.⁵ ActionLAC is an illustrative case of the GCAA's indirect catalytic impacts, as it was set up in response to UNFCCC negotiations and the LPAA. Accordingly, ActionLAC's mission is highly complementary with the GCAA.

First, while the GCAA features a disproportionate number of actors based in the global North (Chan 2016), ActionLAC targets actors that have little connection to global processes, such as community-based organizations, small enterprises, and local governments, and aims for inclusive climate policy-making in Latin America (Fundación Avina 2017).

Second, ActionLAC emphasizes implementation by ensuring compatibility between non-state contributions and NDCs. For instance, one of its partners, the 'Argentinean Network of Municipalities in face of Climate Change' (RAMCC), encourages its members to make climate inventories and local action plans. Through a pilot project with ActionLAC, membership has grown from 78 to 124 members between December 2015 and May 2017, and 74 members subscribed to the Compact of Majors (a GCAA recognized climate action), boosting Argentina-based participation in the GCAA. The project also engaged 20 municipalities in a NDC revision process, creating one of the first formal linkages between local governments and NDC reformulation processes in Latin America and globally.

Third, through the inclusion of underrepresented stakeholders, ActionLAC promotes inclusiveness, social justice, and sustainable development as major goals alongside climate governance. The inclusion of a wider set of stakeholders allows for a more integrated approach combining sustainable development with climate governance. For instance, one pilot project, the Latin American Access to Water Declaration (AWD), includes 172 climate action targets by 19 non-state actors from seven countries. The Declaration paved the way for the first-time participation of community water organizations in a UN Climate conference, when it was presented at the 'Resilience Day' during the Paris Climate Conference.

Finally, ActionLAC wants to provide support throughout a 'life-cycle of climate actions,' an iterative process that includes (1) the mobilization of climate action; (2) the elaboration of action plans; (3) the mobilization of climate finance; (4) the support for implementation; (5) monitoring and measuring through self-reporting; and (6) the communication of results to help improve policies. ActionLAC seems to be particularly well positioned to improve access to climate finance, as its lead partner, Fundación Avina, has long-standing experience in mobilizing funds, and was one of the first entities from Latin America to become accredited with the Green Climate Fund. Moreover, ActionLAC aims to raise awareness and stimulate learning between local and regional actors by connecting local actors with global processes (in particular the GCAA) and national policy-making (e.g., in Argentina).

Having started in late 2015, ActionLAC has yet to assess its impacts. Initial activities, however, suggest that it has strengthened linkages between levels of governance by supporting engagement of sub-national actors in the revision of NDCs, and by bringing local resilience actions under the spotlight of the GCAA. It remains to be seen whether



https://actionlac.net/sobre-actionlac/.

⁶ Interview with the Executive Secretary for the RAMCC, also see: http://www.ramcc.net/ and http://www.globalcovenantofmayors.org/.

http://www.greenclimate.fund/-/fundacion-avina.

ActionLAC's linking of global arenas and Latin American climate actions will translate into greater social justice and higher government ambitions. ActionLAC itself faces limited financial resources and lacks an approach to undertake a comprehensive valuation of its efforts (see: Van der Ven et al. 2017). Other challenges include language barriers and concerns by non-state actors about setting targets without assurance of means of implementation.

3.3 Teri Council for Business Sustainability

Contrary to the other cases presented in this study, the Teri Council for Business Sustainability (CBS) predated the Paris Conference. Set up in 2001 by the Energy and Resources Institute (TERI), CBS is a CEO-led industry body aiming at mainstreaming sustainability into corporate practices. Its concern with climate change also predates the GCAA; in 2008, the CBS together with business representatives developed a Corporate Action Plan on Climate Change as a white paper submission to India's National Action Plan on Climate Change. The plan set out corporate priorities regarding, inter alia, energy efficiency, sustainable agriculture, and knowledge sharing. The plan attracted considerable attention; between September and December 2008, the CBS held a series of consultations, including an interactive session with Secretary General Ban Ki-moon, and reviews by nine ministries. The GCAA and the process toward a new agreement gave new impetus to the CBS. In 2015, the CBS mobilized about 200 corporate leaders in consultations over a period of 9 months to formulate a common vision to motivate corporate action. After the Paris Agreement, CBS has the opportunity to become an orchestrator by encouraging corporate networks to mobilize business actions toward implementation.

While the CBS has the potential to engage more actors, the focus has been on large corporations. Thus, additionality vis-à-vis the GCAA for building catalytic linkages is low because large corporations are already overrepresented. However, few of the recorded actions by large companies in NAZCA are in developing countries. Subsequently, the CBS plays an important role in redressing participatory imbalances between the global North and South. For instance, as a member of the international business alliance 'We Mean Business' (WMB) it brought many Indian corporate leaders on board in the showcasing of business leadership in the run-up to the Paris Climate Conference.

The CBS' contribution to NDC implementation has hitherto been limited. Its main product, the Corporate Vision, was formulated in advance of the agreement. Nonetheless, there is potential in leveraging CBS's membership of leading corporations and its trusted relationship with national and state-level policy makers in India. In the past, familiarity and trust with both the corporate and public sectors have allowed the CBS to engage in advocacy and in the preparation of policy recommendations. Strong national and state-level linkages could be helpful in NDC implementation, to encourage private sector contributions, and also to demonstrate the viability of more ambitious climate policies.

Contrary to the GCAA's strong focus on mitigation, CBS has emphasized adaptation. On the one hand, the Corporate Vision showcases actions that promote adaptation and the reduction in business risks. On the other hand, CBS aims to help businesses identify opportunities to adapt and to reduce risks. The relation to the 1.5 °C target is not explicitly made, although the CBS draws attention to business opportunities in the pursuit of carbon neutrality. The CBS does not explicitly address equity and social justice concerns.



According to TERI, the social outcomes of—mostly adaptation related—action is driven by corporate social responsibility policies of individual business members.⁸

The CBS plays a limited role in strengthening climate action as it mainly engages 'frontrunners' of sustainability with limited need of support to realize actions. The CBS has hitherto done little to support smaller enterprises that make up the lion's share of the Indian economy and that face considerable short-term costs when mainstreaming climate actions. Accordingly, an important challenge is to create scenarios for different types of businesses to overcome challenges to climate action.

3.4 National Climate Change Cabinet (NCCC)

The National Climate Change Cabinet (NCCC) is a response by the Argentinean government to climate commitments made internationally and nationally and is based on an understanding that governmental interventions need to engage multiple policy areas and specialists from the private sector, civil society, and academia. It was launched on the occasion of Argentina's signing of the Paris Agreement. The Cabinet, presided over by the Head of Government and coordinated by the Sub-secretariat of Climate Change and Sustainable Development at the Ministry of Environment and Sustainable Development, involves 12 ministries to articulate climate policies and raise awareness (Republic of Argentina 2016a). NCCC's work is organized around technical roundtables. The NCCC involves coordination as an important mode of governance, as key points are raised in a national roundtable of ministerial focal points, at inter-ministerial meetings, and in roundtables with civil society organizations. NCCC, however, also involves orchestration, as it engages provinces in climate action through the Federal Council for the Environment (COFEMA).

One of NCCC's aims is to articulate participatory processes and synergies between different areas and levels of the government. In a relatively short time, the NCCC has engaged more than 40 non-state and sub-national actors in an NDC revision process. However, it also encountered challenges. Despite broad participation, many actors still lack capacities to effectively engage. Moreover, participants are sometimes disappointed by the fact that national and international processes move slowly, and expected results, such as access to finance, are yet to be realized. The NCCC also had to overcome initial distrust among roundtable partners; regularity of interactions, however, proved helpful in this process.

In terms of implementation, the NCCC made an important contribution in helping Argentina to revise its NDC in 2016. The revision process included several intergovernmental meetings, two extended roundtables with civil society partners, five meetings with COFEMA, and consultations with municipalities from RAMCC (see above) and with non-state actors through correspondence using detailed templates. The extended roundtable meetings and the consultation also helped to collect opinions on the original NDC and to elicit inputs toward new mitigation and adaptation measures. Contributions were organized around six topics and included over 200 suggested measures. This process is ongoing, with calculations of mitigation to be made alongside discussions on implementation.

¹⁰ Interview to representative of the Ministry of Environment and Sustainable Development.



⁸ Interview with Arupendra Nath Mullick, CBS coordinator at TERI.

⁹ https://www.infobae.com/2016/04/22/1806458-el-gobierno-creo-el-gabinete-cambio-climatico/.

The NCCC is paying attention to mitigation as well as adaptation, as it seeks to integrate climate change mitigation and adaptation into planning of different sectors and systems. The revision process led to a reduction in the emission target from 570 Mt CO₂eq by 2030 to 484 Mt CO₂eq (most of it reflecting a more accurate methodology for estimating emissions); in addition the revised NDC sets a conditional target to reduce emissions by 223 Mt CO₂eq by 2030 (Republic of Argentina 2016b). Including the conditional reduction, Argentina would peak emissions by 2020 and contribute 1.3% of the global effort necessary to closing the emission gap for a 2 °C pathway, and a significant share of the ambition needed for a 1.5 °C pathway. The targets, however, may become more ambitious, as mitigation contributions from non-state actors are still being calculated for possible inclusion in a revised NDC.

The NCCC strengthens non-state action mainly by engaging actors in a participatory process that coordinates different areas and levels of the government. Particularly, subnational actors, provinces, and municipalities have been given greater voice and opportunities to contribute. The process will continue in the coming years, aiming at strengthening the link between non-state actors and NDC implementation. This process will include the formulation of sectoral and provincial roadmaps, 11 and, the strengthening of capacities, for instance by improving access to finance.

3.5 Fossilfritt sverige

The Swedish government launched Fossilfritt Sverige (FS, translated: Fossil Free Sweden), as a platform for dialogue and cooperation between government and non-state actors such as companies, cities, and civil society. Although FS primarily responds to a national commitment, the idea behind FS was strongly influenced by the GCAA, in particular the LPAA, and could be thought of as a 'Swedish replique.' The impact of the GCAA on the FS is apparent in its institutional set up; instead of developing its own registry of actions, FS encourages members to report to NAZCA, which may explain the large share of NAZCA commitments by Swedish companies (Engström-Stensson and Widerberg 2016).

FS was initiated on the premise that climate policy cannot be dictated top down but needs buy-in and bottom-up support. Bottom-up action, especially by large companies and cities, would not only be needed to implement national targets but also to influence national policy processes and international negotiation positions. Industry support is also considered pivotal for enabling an ambitious climate policy. FS is instrumental in leveraging broad economic support by linking a low-carbon agenda to broader industrial policy processes such as the national export strategy, the smart industry and reindustrialization strategy (Smart industri—en ny industrialiserings strategi), the agenda for a bio-based economy (Agendan för biobaserad näringslivsutveckling), the national innovation council, and several others. FS currently engages about 170 organizations. The broadening of stakeholder engagement is an ongoing process and can be expected to accelerate as the government appointed a high-profile figure in the Swedish environmental movement, Svante Axelsson, in 2016 as a liaison between the government, non-state and sub-national actors and the platform. The liaison is mandated to engage more organizations as well as to increase the visibility of their actions.

¹³ Interview with representative of the Swedish ministry of the environment.



http://ccsc.mrecic.gov.ar/userfiles/soledada_aguilar_2017_06_12_ppt_cancilleria.pdf.

¹² Interview with representative of the Swedish ministry of the environment.

The FS responds to a 2015 national government commitment to become among the world's first fossil-free welfare countries (Regeringen 2015). In 2017, the government operationalized its ambition to become net fossil free by 2045, including an 85% reduction in GHG emissions compared to 1990 levels (Regeringen 2017).

FS neither explicitly aims at adaptation; nor does it refer to social justice. Arguably, FS—by helping the implementation of the national government's relatively ambitious mitigation goal—may be more reflective of a global 1.5 °C mitigation pathway. The goal definition, however, has strictly been framed in national terms, and no reference has been made to the 1.5 °C target.

Not unlike the CBS, FS is engaging frontrunners. It provides a voluntary framework without setting quantified goals or monitoring and reporting requirements. Within this framework there is little support beyond possibly facilitating learning in dialogues. Arguably, in more developed countries, the provision of support is less urgent. Rather, it is assumed that a high-level orchestration initiative such as FS could provide sufficient incentives to accelerate action. It remains to be seen whether this is true. While the Swedish government hopes that large emitters such as in the transport, steel, and construction industry will join, growing engagement alone is not enough, rather commitments need to be kept and result in actual emissions reductions.

4 Discussion and conclusion

The five cases suggest that the GCAA has had indirect catalytic effects on the emergence and development of national and regional orchestration initiatives. FS was modeled after the GCAA, in particular the LPAA; ActionLAC was set up as a response to GCAA; and the ICGC is a spin-off of French efforts to mobilize actions in advance of the Paris Climate Conference. Even the CBS, which predates the GCAA, found new impetus on the road to a new climate agreement. In a few cases, national and regional orchestrators also defined complementary roles vis-à-vis the GCAA. For instance, FS encourages its members to register to NAZCA; and, both ActionLAC and CBS aim to increase participation of their constituents (Argentinian municipalities and India-based companies, respectively) in the GCAA.

The five cases display a wide variety in orchestrators and orchestration functions, for instance, to support non-state actions (ICGC, ActionLAC); to formulate integrated visions and policies (CBS, NCCC); and, to elicit new commitments (FS). Some regional and national actors engaged in orchestration for the first time. The 'various interests' group ¹⁴ of the EESC saw an opportunity to strengthen its intra-organizational profile by helping to establish the ICGC. In Argentina and Sweden, governments took the role of orchestrator, respectively, to engage non-state and sub-national actors in the adjustment of an NDC, and to elicit commitments from the private sector.

To understand how national and regional orchestrators could support the GCAA, we identified some limitations of the GCAA, and explored how national and regional orchestrators respond to them. These are by no means all possible activities that national and regional orchestrators could engage in, neither is the GCAA static as it continues to define its role. Nonetheless, at this crucial point, before the facilitative dialogue in 2018 and still under the agenda to enhance action in the context of the UNFCCC before 2020, regional and national orchestrators could enhance catalytic linkages vis-à-vis the GCAA by (1) bringing on board underrepresented actors; (2) contributing to the NDC



¹⁴ The other two constituent groups of the EESC are workers and employers.

Table 1 Catalytic linkages between regional/national orchestration and the GCAA

Catalytic linkages	ICGC	ActionLAC	CBS	NCCC	FS
Bringing on board new/ underrepresented actors	Focus on mostly European actors	Focus on Latin American actors (small/medium enterprises and local governments)	Focus on large India-based corporations	Focus on ministries, civil society and provinces	Focus on Swedish companies, cities, civil society and academia
Contributing to implementation	Focus on smaller-scale action to enable rapid implementation	Ensuring compatibility between non-state action and NDCs	No explicit focus on implementation	Strong focus on NDC revision and implementation	Focus on bottom-up actions to become net fossil free by 2045
Emphasizing 15 °C target and social justice	No 1.5 °C reference; focus on climate justice in European context	No 1.5 °C reference; aiming to engage underrepresented communities	No 1.5 °C reference; adaptation focus; addressing North/South imbalances in business engagement	No 1.5 °C reference; focus on adaptation and mitigation	No 1.5 °C reference; no social justice or adaptation focus
Providing support	Development of toolkit' for organizations to engage in climate action	Support throughout life cycle of climate action	Little or no support; engaging frontrunners of sustainability	Facilitating participatory process; greater voice for civil society and local governments	Little or no support; engaging frontrunners



implementation; (3) emphasizing the 1.5 °C target and associated social justice concerns (4) and by providing ideational and material support (Table 1).

In terms of bringing on board new actors, some orchestrators seek to narrow North–South disparities. ActionLAC enabled representation of Latin American community water organizations, and, the CBS increased the proportion of South-based companies in the GCAA. Other orchestrators engage actors that are not typically seen as environmental actors, such as the ICGC, which *inter alia* targets employers and workers, while others engage 'usual suspects,' for instance, FS and CBS mostly aimed at engaging large businesses.

Considerable variation exists with regard to whether regional and national orchestration contributes to the implementation of NDCs. The NCCC and FS have national implementation as their main objectives. The NCCC already led to the revision of Argentina's NDC. However, the CBS and the ICGC focus on incentivizing actions without specifying how they relate to implementation.

Although orchestration of non-state actions could be an important lever to achieve the $1.5~^{\circ}\text{C}$ target, few initiatives explicitly mention it. The ICGC regards its support of the $1.5~^{\circ}\text{C}$ target as implicit in its main mission to provide tools for effective climate actions. Most initiatives we analyzed were established in the run-up to the Paris Agreement, when the $1.5~^{\circ}\text{C}$ target was not yet anticipated to become part of the agreement. However, even the NCCC, the only initiative in our sample that was set up after Paris, refers to the $2~^{\circ}\text{C}$ target rather than the $1.5~^{\circ}\text{C}$ target.

The 1.5 °C can also be seen as relating to social justice. Arguably, orchestrators in the developing world are more likely to give voice to actors that are currently underrepresented. However, we found very limited evidence among our cases. ActionLAC brought community water organizations into the UNFCCC process where they were not previously represented. The CBS, however, referred to social justice as individual companies' corporate social responsibility—rather than as an objective of its own efforts. Perhaps surprisingly, the North-based ICGC may be among the most responsive to social justice, as it addresses equity as a regional concern, rather than imbalances between countries of the global North and South.

Finally, national and regional orchestrators could improve catalytic linkages vis-à-vis the GCAA by providing ideational and material support for non-state actions. For instance, taking a 'life-cycle' view of actions, ActionLAC wants to help newly engaged actors by *inter alia* elaborating action plans; and facilitating access to finance. The ICGC aspires to help non-state actors by providing a 'toolkit' for organizations that wish to engage in climate action. However, one toolkit for many types of actors across various sectors seems insufficient. Other initiatives provide little support to non-state actions. The CBS and FS mainly target large corporations that do not necessarily lack resources. To help other actors to take climate action, however, orchestrators seem to heavily rely on their own limited capacities. Most initiatives are just starting up, focusing on operations (defining their mission, determining the scope of their activities, etc.) before helping other actions. Moreover, orchestration initiatives such as ActionLAC and the ICGC indicate that they face limited resources and capacities themselves. National and regional orchestration currently may rely too much on voluntary efforts, and command too few resources to ensure longer-term effectiveness.

Currently, orchestration—international, regional, and, national—seems to act on the assumption that more action is better. However, interactions between orchestrators could be conflicting. For instance, a regional orchestrator could overstretch its capacities by focusing on too many countries, and by duplicating work. This may become the case with the ICGC, which aspires to engage actors from developing countries although it is better positioned to engage actors in Europe. Orchestrators should not seek to address every



relevant issue or target every type of actor, nor should they seek to address every limitation of other orchestration initiatives. Greater institutional likeness between orchestration initiatives, or the reproduction of the GCAA across different contexts, may not necessarily improve linking between initiatives. Instead, when orchestrators act on comparative advantages, orchestration should display considerable diversity. Our findings indicate that, despite significant catalytic impact from the GCAA, regional and national initiatives are not becoming more institutionally alike. Regional and national orchestrators do not simply copy the GCAA; rather, they emphasize only one or a few catalytic links. For instance, CBS focuses on the engagement of businesses; ActionLAC and ICGC focus on supporting climate actions; and the NCCC focuses on implementation.

We believe that multiple orchestrators acting on comparative advantages is preferable. For instance, the GCAA has proven quite successful using the convening power of the UN to mobilize leaders from civil society, business and governments. It has, however, been less successful at facilitating learning between non-state actors. Regional orchestrators may be better placed to enable learning. Within a region there will be considerable divergence in terms of approaches and solutions, but these may be more readily applicable across countries with shared linguistic, cultural, and/or economic characteristics.

From a social justice perspective, multiple orchestrators at different levels of governance also presents with an opportunity to give voice to the underrepresented, and to address questions of equity in specific regional contexts, as evidenced in our European case. The potential to address social justice through regional orchestrators, however, has scarcely been utilized. For instance, some developing country based orchestration initiatives reinforce the position of already powerful large corporations, while none specify what is needed to limit climate change to 1.5 °C.

In some cases, catalytic linkages could be improved through coordination. Most orchestration efforts, including the GCAA, seem to emphasize the scale of actions, for instance by focusing on actions with high mitigation potential. Given the enormous scale needed for a low-carbon transformation, a focus on scale may seem a natural choice. However, for socially just outcomes orchestrators need to resist a sole focus on scale, and also aim at more experimental actions and actions by smaller stakeholders, which may not lead to short-term large-scale impacts but which may prove crucial in longer-term transformations (Chan 2016, also see: Abbott 2017). Regional and national orchestrators could also coordinate efforts to focus on different subsets of climate commitments; finding suitable regional and domestic partners to join initiatives, and enabling implementation in specific regions and localities.

By looking at how regional and national orchestrators are defining their operations, the article provides an early indication of their catalytic potential, and their possible contribution. It demonstrated that the GCAA had indirect catalytic effects on orchestration initiatives, and that regional and national orchestration initiatives are very diverse, both in their organizational features, as well as in the type of catalytic linkages they seek to strengthen vis-à-vis the GCAA. As more data are gathered on the social and ecological effects of orchestration, future scholars should attempt to assess the impacts of orchestration; to understand factors that underlie the ability of orchestration initiatives to replicate and scale actions in a just and equitable manner; and to understand whether and to what extent orchestration helps to realize a $< 1.5\ ^{\circ}\text{C}$ world.

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References

- Abbott, K. (2017). Orchestrating experimentation in non-state environmental commitments. *Environmental Politics*, 26(4), 738–763.
- Abbott, K., Genschel, P., Snidal, D., & Zangl, B. (2015). Two logics of indirect governance: Delegation and orchestration. *British Journal of Political Science*, 46(4), 719–729. https://doi.org/10.1017/s0007123414000593.
- African Development Bank, Asian Development Bank, Department for International Development, Directorate-General for Development, Federal Ministry for Economic Cooperation and Development, Ministry of Foreign Affairs Development Cooperation, & The World Bank. (2003). Poverty and climate change. Reducing the vulnerability of the poor through adaptation, OECD.
- Betsill, M., Dubash, N., Paterson, M., Van Asselt, H., Vihma, A., & Winkler, H. (2015). Building productive links between the UNFCCC and the broader global climate governance landscape. Global Environmental Politics, 15(2), 1–10.
- Blok, K., Höhne, N., van der, K., & Harrison, N. (2012). Bridging the greenhouse-gas emissions gap. *Nature Climate Change*, 2(7), 471–474.
- Carleton, T. A., & Hsiang, S. M. (2016). Social and economic impacts of climate. Science. https://doi.org/ 10.1126/science.aad9837.
- Chan, S. (2016). Climate action beyond mitigation and the global North. Seminar, 683, 37-41.
- Chan, S., Brandi, C., & Bauer, S. (2016). Aligning transnational climate action with international climate governance: The road from Paris. Review of European, Comparative & International Environmental Law, 25(2), 238–247.
- Chan, S., Falkner, R., Goldberg, M., & van Asselt, H. (2018). Effective and geographically balanced? An output-based assessment of non-state climate actions. *Climate Policy*, 18(1), 24–35. https://doi.org/10.1080/14693062.2016.1248343.
- Chan, S., & Pauw, P. (2014). A global framework for climate action: Orchestrating non-state and subnational initiatives for more effective global climate governance. German Development Institute Discussion Paper 34/2014. https://www.die-gdi.de/discussion-paper/article/a-global-framework-for-climate-action-orchestrating-non-state-and-subnational-initiatives-for-more-effective-global-climate-governance/. Accessed May 11, 2017.
- Chan, S., van Asselt, H., Hale, T., Abbott, K. W., Beisheim, M., Hoffmann, M., et al. (2015). Reinvigorating international climate policy: A comprehensive framework for effective nonstate action. *Global Policy*, 6(4), 466–473. https://doi.org/10.1111/1758-5899.12294.
- Climate Action Tracker. (2016). The ten most important short-term steps to limit warming to 1.5 °C (p. 44). Climate Action Tracker.
- Dooley, K., & Kartha, S. (2017). Equitable land-use and the 1.5 °C climate goal. International Environmental Agreements.
- Engström-Stenson, D., & Widerberg, O. (2016). Linking state, non-state and subnational climate action: The case of Sweden. Fores and the Institute for Environmental Studies (IVM) at Vrije Universiteit Amsterdam. Policy brief 2016/11. http://fores.se/wp-content/uploads/2016/11/NSA-Policy-brief-Marrakesh.pdf. Accessed May 11, 2017.
- Fundación Avina. (2017). 2016 annual report. http://www.avina.net/avina/wp-content/uploads/2017/05/informe-anual-avina-2016-eng.pdf. Accessed May 11, 2017.
- Galvanizing the Groundswell of Climate Actions. (2015). Memorandum: Accelerating the action agenda through robust and credible climate commitment from non-state actors. http://static1.squarespace.com/static/552be32ce4b0b269a4e2ef58/t/55a1426ae4b002de2595de4d/1436631658366/Accelerating+the+Action+Agenda+through+Robust+and+Credible+Commitments+-+General.pdf. Accessed May 11, 2017.
- Graichen, J., Healy, S., Siemons, A., Höhne, N., Kuramochi, T., Gonzales Zuñiga, & S., Wachsmuth, J. (2016). Climate initiatives, national contributions, and the Paris Agreement. Berlin: Öko-Institut. http://www.oeko.de/oekodoc/2554/2016-079-de.pdf. Accessed May 11, 2017.
- Hale, T. (2016). "All hands on deck": The Paris agreement and nonstate climate action. Global Environmental Politics, 16(3), 12–22.



Hale, T., & Roger, C. (2014). Orchestration and transnational climate governance. The Review of International Organizations, 9(1), 59–82.

- Harrison, N., Bartlet, N., Höhne, N., Braun, N., Day, T., Deng, Y., et al. (2014). Enhancing ambition through international cooperative initiatives. http://mitigationpartnership.net/sites/default/files/norden_ici.pdf. Accessed May 11, 2017.
- Hsu, A., Moffat, A. S., Weinfurter, A. J., & Schwartz, J. D. (2015). Towards a new climate diplomacy. *Nature Climate Change*, 5(6), 501–503.
- Jacobs, M. (2016). High pressure for low emissions: How civil society created the Paris climate agreement. Juncture, 22(4), 314–323.
- Okereke, C., & Coventry, P. (2016). Climate justice and the international regime: Before, during, and after Paris. *Wiley Interdisciplinary Reviews: Climate Change*, 7(6), 834–851.
- Regeringen. (2015). Regeringsförklaringen 2015. http://www.socialdemokraterna.se/Stefan-Lofven/Tal-och-artiklar/2015/Regeringsforklaring-avgiven-av-statsminister-Stefan-Lofven/. Accessed May 11, 2017.
- Regeringen. (2017). Ett klimatpolitiskt ramverk för Sverige. Lagrådsremiss. http://www.regeringen.se/48fe53/contentassets/033bd3e0a16a4d088e20c6e6b5d6b3d3/ett-klimatpolitiskt-ramverk-for-sverige.pdf. Accessed May 11, 2017.
- Republic of Argentina. (2016a). Creación del Gabinete Nacional de Cambio Climático: Decreto 891/16 http://argentinambiental.com/legislacion/nacional/decreto-89116-creacion-del-gabinete-nacional-cambio-climatico/. Accessed May 11, 2017.
- Republic of Argentina. (2016b). Primera Revisión de su Contribución Determinada a Nivel Nacional http://www4.unfccc.int/ndcregistry/PublishedDocuments/Argentina%20First/17112016%20NDC% 20Revisada%202016.pdf. Accessed May 11, 2017.
- Roelfsema, M., Harmsen, M., Olivier, J., & Hof, A. (2015). Climate action outside the UNFCCC: Assessment of the impact of international cooperative initiatives on greenhouse gas emissions. http://www.pbl.nl/sites/default/files/cms/pbl-2015-climate-action-outside-the-unfccc_01188.pdf. Accessed May 11, 2017.
- Rogelj, J., den Elzen, M., Höhne, N., Fransen, T., Fekete, H., Winkler, H., et al. (2016). Paris agreement climate proposals need a boost to keep warming well below 2 C. *Nature*, 534(7609), 631–639.
- UNEP. (2015). Climate commitments of subnational actors and business: A quantitative assessment of their emission reduction impact. Nairobi: United Nations Environment Programme (UNEP). http://apps.unep.org/redirect.php?file=/publications/pmtdocuments/-Climate_Commitments_of_Subnational_Actors_and_Business-2015CCSA_2015.pdf.pdf. Accessed May 11, 2017.
- Van der Ven, H., Bernstein, S., & Hoffmann, M. (2017). Valuing the Contributions of Nonstate and Subnational Actors to Climate Governance. Global Environmental Politics, 17(1), 1–20. https://doi. org/10.1162/GLEP_a_00387.
- Widerberg, O. (2017). The 'Black Box' problem of orchestration: how to evaluate the performance of the Lima-Paris Action Agenda. *Environmental Politics*, 26(4), 715–737. https://doi.org/10.1080/09644016. 2017.1319660.
- Widerberg, O., & Pattberg, P. (2015). International cooperative initiatives in global climate governance: Raising the ambition level or delegitimizing the UNFCCC? *Global Policy*, 6(1), 45–56.

