



OPINION

Promises and risks of nonstate action in climate and sustainability governance

Sander Chan¹  | Idil Boran²  | Harro van Asselt³ | Gabriela Iacobuta¹ | Navam Niles⁴ | Katharine Rietig⁵ | Michelle Scobie⁶ | Jennifer S. Bansard⁷ | Deborah Delgado Pugley⁸ | Laurence L. Delina⁹ | Friederike Eichhorn¹⁰ | Paula Ellinger¹¹ | Okechukwu Enechi¹² | Thomas Hale¹³ | Lukas Hermwille¹⁴ | Thomas Hickmann⁷ | Matthias Honegger¹⁵ | Andrea Hurtado Epstein¹⁶ | Stephanie La Hoz Theuer¹⁷ | Robert Mizo¹⁸ | Yixian Sun¹⁹ | Patrick Toussaint²⁰ | Geoffrey Wambugu²¹

¹Deutsches Institut für Entwicklungspolitik, Environmental Governance, Bonn, Germany

²Faculty of Liberal Arts and Professional Studies, Department of Philosophy, York University, Toronto, Ontario, Canada

³University of Eastern Finland, Joensuu, Finland

⁴Centre for Poverty Analysis, Colombo, Sri Lanka

⁵School of Geography Politics and Sociology, Newcastle University, Newcastle upon Tyne, UK

⁶Sir Arthur Lewis Institute of Social Economic Studies, University of the West Indies, St. Augustine, Trinidad and Tobago

⁷Faculty of Economics and Social Sciences, University of Potsdam, Potsdam, Germany

⁸Pontificia Universidad Católica del Perú, Lima, Peru

⁹Frederick S Pardee School of Global Studies, Boston University, Boston, Massachusetts

¹⁰Deutsches Institut für Entwicklungspolitik, Bonn, Germany

¹¹Fundación Avina, Buenos Aires, Argentina

¹²Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam, Amsterdam, Netherlands

¹³Blavatnik School of Government, Oxford University, Oxfordshire, UK

¹⁴Wuppertal Institute for Climate, Environment, and Energy, International Climate Policy Research Unit, Wuppertal, Germany

¹⁵Institute for Advanced Sustainability Studies eV, Potsdam, Germany

¹⁶GIZ Mexico, Mexico City, Mexico

¹⁷Adelphi, Berlin, Germany

¹⁸Kamala Nehru College, University of Delhi, New Delhi, India

¹⁹Graduate Institute of International and Development Studies, Centre for International Environmental Studies, Genève, Switzerland

²⁰Institute for Advanced Sustainability Studies eV, Potsdam, Germany

²¹School of Natural Resources and Environmental Studies, Karatina University, Karatina, Kenya

Correspondence

Sander Chan, Deutsches Institut für Entwicklungspolitik, Environmental Governance, Bonn, Germany.
Email: sander.chan@die-gdi.de

Edited by Heike Schroeder, Domain Editor, and Mike Hulme, Editor-in-Chief

Sustainable Development Goals and the Paris Agreement stand as milestone diplomatic achievements. However, immense discrepancies between political commitments and governmental action remain. Combined national climate commitments fall far short of the Paris Agreement's 1.5/2°C targets. Similar political ambition gaps persist across various areas of sustainable development. Many therefore argue that actions by nonstate actors, such as businesses and investors, cities and regions, and nongovernmental organizations (NGOs), are crucial. These voices have resonated across the United Nations (UN) system, leading to growing recognition,

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2019 The Authors. *WIREs Climate Change* published by Wiley Periodicals, Inc.

[Correction added on 11 January 2019, after first online publication: Thomas Hickmann has been included in the author byline.]

promotion, and mobilization of such actions in ever greater numbers. This article investigates optimistic arguments about nonstate engagement, namely: (a) “the more the better”; (b) “everybody wins”; (c) “everyone does their part”; and (d) “more brings more.” However, these optimistic arguments may not be matched in practice due to governance risks. The current emphasis on quantifiable impacts may lead to the under-appreciation of variegated social, economic, and environmental impacts. Claims that everybody stands to benefit may easily be contradicted by outcomes that are not in line with priorities and needs in developing countries. Despite the seeming depoliticization of the role of nonstate actors in implementation, actions may still lead to politically contentious outcomes. Finally, nonstate climate and sustainability actions may not be self-reinforcing but may heavily depend on supporting mechanisms. The article concludes with governance risk-reduction strategies that can be combined to maximize nonstate potential in sustainable and climate-resilient transformations.

This article is categorized under:

Policy and Governance > Multilevel and Transnational Climate Change Governance

KEYWORDS

climate change, governance, nonstate actions, SDGs, sustainable development

1 | INTRODUCTION

Both the Paris Agreement on climate change and the UN Sustainable Development Goals (SDGs) converge on the idea that nonstate actors such as businesses, investors, cities, regions, and NGOs¹ can and do deliver on agreed goals. Prominent figures like former U.S. President Barack Obama and former Executive Secretary of the United Nations Framework Convention on Climate Change (UNFCCC) Christiana Figueres argued that nonstate actors have already spurred low-carbon and sustainable transformations, calling for their acceleration (Figueres et al., 2017; Obama, 2017). Both the UN and the UNFCCC recognize these actions and set up platforms registering voluntary nonstate commitments and partnerships, such as “Partnerships for SDGs” and the “Non-state Actor Zone for Climate Actions” (NAZCA).

Combined national climate commitments fall far short of the Paris Agreement's 1.5/2°C targets (Rogelj et al., 2016). Similar gaps persist across sustainable development areas. Such gaps between government interventions, outcomes, and international targets have sparked varying perspectives in scholarship about nonstate actions' contribution. Some doubt their effectiveness (e.g., Michaelowa & Michaelowa, 2017) or stress their dependency on state-based forms of governance (e.g., Bulkeley et al., 2012; Hickmann, 2017), yet others assert that nonstate actions will contribute to complexity, fragmentation, and possibly undermine governance legitimacy and accountability (Kuyper, Linnér, & Schroeder, 2017). A growing number of studies, however, take an optimistic, if cautious, view that nonstate action could bridge governance gaps (e.g., Graichen et al., 2016; Hsu, Cheng, Weinfurter, Xu, & Yick, 2016; Hsu, Moffat, Weinfurter, & Schwartz, 2015; Roelfsema, Harmsen, Olivier, Hof, & Van Vuuren, 2018; Tosun & Schoenefeld, 2017). While there has been growing optimism, and emphasis on potential and positive signals, few studies look at whether, and under which circumstances, optimistic expectations can be realized.

This opinion² reflects on the growing optimism in policy making and in scholarship about the role of nonstate actors in sustainable and climate-resilient³ transformations.

Positive arguments for nonstate actions were identified through exploratory readings of policy communications, opinion pieces, and research publications. Following extensive dialogues and teleconferences, stylized arguments were clustered.⁴ These arguments are not necessarily attributable to one or a few sources but characterize sets of similar reasons in support of nonstate engagement. As the range of possible arguments is indeterminable, and identified arguments may overlap or be combined into many variations, we do not rule out other stylized arguments, nor do we claim comprehensiveness. Multiperspectivity and interdisciplinarity inform our discussion within a uniquely diverse group of scholars and practitioners from developing and developed countries.⁵

We formulate four stylized arguments as follows: (a) “the more the better”; (b) “everybody wins”; (c) “everybody does their part”; and (d) “more will bring more.” We reflect on what it takes to realize positive outcomes of nonstate engagement

by identifying governance risks and discussing opportunities to mitigate them. Given the great diversity among nonstate actors, the following discussion also illustrates which types of actors are likely to relate to the respective arguments.

2 | THE PROMISE OF NONSTATE ACTIONS

Optimistic arguments about nonstate action are neither mutually exclusive nor expressive of single ideas. Rooted in multiple rationales, they imply causal relationships between nonstate engagement and positive governance outcomes. However, governance risks may hinder such outcomes.

2.1 | The more the better

The “Partnerships for the SDGs” and NAZCA platforms visualize large numbers of nonstate actions. Nonstate actions’ catalytic effect aside (see Section 2.4), their increasing numbers is cause for considerable optimism. “The more the better” denotes the view that large numbers of sustainability and climate actions are desirable. The rationale is that nonstate actors have the clout to enable change irrespective of what national governments do. For example, the “America’s Pledge” report highlights United States-based efforts, stressing that “[d]espite federal efforts to roll back policies and programs, climate action is robust and accelerating across an increasing swath of America” (Bloomberg Philanthropies, 2017, p. 9). But are high numbers a reliable indication of progress?

In aggregate, more nonstate action can help close gaps in governance. In the climate realm, such action, particularly by multistakeholder partnerships (or cooperative initiatives), businesses, and subnational authorities, can address mitigation gaps left by insufficient government commitments (e.g., UNEP, 2017, 2018). However, different aggregation methodologies result in divergent estimates (e.g., Hsu et al., 2018; UNEP, 2016). Moreover, double counting may occur when, for instance, both cooperative initiatives’ outcomes and individual participants’ actions are counted. Similarly, double or triple counting of national, regional, and local government actions may occur (Widerberg & Pattberg, 2015). One governance risk is that national governments may rely on overestimated impacts, basing policies on inaccurate assessments and concluding erroneously that national targets have been met (Hermwille, 2018).

Another risk is to overemphasize actors with “high mitigation potential”—for instance, businesses in the energy sector—while underappreciating actors such as knowledge institutions or community-level organizations whose contributions are less easily quantifiable. Knowledge sharing, fostering dialogue, capacity building, and technology transfer can have long-term transformational effects that are challenging to measure (Chan, Ellinger, & Widerberg, 2018). Moreover, focusing on one form of aggregation (e.g., emissions reduction, development finance) may result in overlooking co-benefits to other sustainable development areas at best. At worst, it may mask negative consequences for other sustainability goals (Oberghassel et al., 2017; Von Stechow et al., 2015). For instance, while some initiatives for SDG 7 (affordable and clean energy) are compatible with other SDGs, others may cancel out improvements (McCollum et al., 2018).

2.2 | Everybody wins

Without climate-resilient and sustainable development, all stand to lose, and existing achievements are at risk. “Everybody wins” captures the view that nonstate actor engagement brings overall benefits through win–win constellations. While there are different rationales for this view, not everyone stands to win from nonstate action.

Nonstate action can help overcome shortcomings of traditional governance (Beisheim & Liesse, 2014; Börzel & Risse, 2010; Hsu et al., 2015), for instance, by providing knowledge and information that support policies and by holding governments accountable (e.g., Setzer, 2015; Van Asselt, 2016). The emphasis under this rationale is on local actors and underrepresented groups in traditional governance. For instance, nonstate actions can give voice to underrepresented groups, improving democratic quality (Bäckstrand & Kuyper, 2017; Nasiritousi, Hjerpe, & Linnér, 2016; cf. Mert, forthcoming). Another variation of “everybody wins” emphasizes the role of the private sector as their actions could lead to better outcomes for all by stimulating growth, innovation, and employment (Pauw & Pegels, 2013). Private sector-led actions are often based on the assumption that profits and social and environmental improvements can coexist (Global Commission on the Economy and Climate, 2015, 2016). Another variation highlights tangible improvements in well-being. Multistakeholder initiatives registered with the UN often refer to specific SDG benefits (UNFCCC, 2018). For instance, initiatives introducing efficient cook stoves reduce biomass combustion and improve air quality and health (Anenberg et al., 2013).

The assumption that everybody wins may, however, create blind spots to governance risks. While formal spaces for engagement are increasing, the participation of, and benefit to, all actors is not guaranteed. For instance, the geography of nonstate actions registered with the UN is highly imbalanced, with most actions led by North-based actors (e.g., Pattberg, Biermann, Chan, & Mert A. (Eds.), 2012; Bulkeley et al., 2012). This raises the question whether most of their benefits would

accrue in the global North rather than where resilience against climate impacts and sustainability needs are most urgent (Chan, Ellinger, & Widerberg, 2018). Moreover, nonstate actions that aim to intervene in developing countries could effectively address one objective while still leading to negative secondary impacts. To illustrate, forest initiatives could effectively contribute to global mitigation efforts while having adverse effects on local communities (e.g., Schroeder, 2010; Suiseeya, 2017).

Powerful private, often North-based, actors can define standards in their own economic interests rather than according to long-term and local sustainable development priorities (e.g., Nasiritousi, 2017). In contrast, smaller and less powerful groups, such as domestic NGOs in developing countries, may lack the capacity to fully engage and shape the landscape of nonstate action through agenda setting, consulting in decision-making processes and implementation (Ponte & Chenys, 2013; Scobie, 2016). In developing countries, governance gaps tend to be wider due to fewer resources for sustainable development challenges (Atteridge, 2011). Nonstate actions can still benefit developing countries (Chan, Ellinger, & Widerberg, 2018); however, specific risks need to be recognized, such as the creation of dependencies, the crowding out of public policies, and gaps left once interventions are over. If these risks are not overcome, nonstate action could perpetuate, rather than solve, governance weaknesses in developing countries (e.g., Michalena & Hills, 2018).

2.3 | Everyone does their part

Nonstate action may play an important role in international negotiations, possibly opening pathways beyond gridlock (Hale, Held, et al., 2017). “Everyone does their part” captures the view that nonstate actors play an instrumental role in implementation. This is not about the number of actions but about the role of nonstate actors. In the run up to the Paris Agreement, a groundswell of climate actions by *all* types of actors instilled confidence that a strong agreement would receive broad societal support (Jacobs, 2016). Agenda 2030 declares that “all countries and *all stakeholders*, acting in collaborative partnership, will *implement* [the SDGs]” (UN General Assembly, 2015, emphasis added). The decision accompanying the Paris Agreement emphasizes that “non-Party stakeholders” can contribute to implementation through scalable and replicable solutions (Chan, Brandi, & Bauer, 2016).

Perceptions of nonstate action as instrumental to implementation have allayed political opposition against nonstate actors (Chan et al., 2016; Pattberg et al., 2012). The rationale is that, once political goals are set, a multiplicity of actors can do their part toward achieving them. An “all-hands-on-deck” approach (Hale, 2016) is particularly attractive when the goals are urgent and time-bound.

However, nonstate actors make strategic considerations that could be of political consequence (Wright & Nyberg, 2015). In some cases, the effectiveness of actions can be disputed. For instance, promoting natural gas as a transition fuel could lead to long-term fossil fuel infrastructure lock-in. Others may set ambitious targets without the means to achieve them or rely on nonexistent or controversial technologies. Yet others may not see benefits in acting at all or even engage in detrimental actions. Such disingenuous actions, especially by economically influential businesses, could cast doubt over nonstate transformation pathways. A company could become “cleaner” by selling off unsustainable investments (such as in coal). If it is a general trend, this would lead to segmentation into cleaner and dirtier markets or relocation of unsustainable operations to places with lower standards, instead of positive net results. An important governance risk is that a growing belief in the benefits of, and reliance on, nonstate action is not matched by actual outcomes.

Nonstate actors may also favor some actions over others. This is seen in “Partnerships for SDGs,” where many more actions address SDG 14 (life below water) than SDG 10 (reduced inequalities). While not necessarily reflecting the scale of proposed solutions, unequal patterns of engagement across different areas may become politically contentious (Bäckstrand et al., 2017). Implementation is therefore not merely a matter of actors doing their part; the role of public actors remains important, for example, by targeting areas that need more attention (e.g., Abbott, 2014; Chan et al., 2015; Chan, Falkner, Goldberg, & Van Asselt, 2018; Hale & Roger, 2014).

2.4 | More will bring more

Although the number of nonstate actions is impressive, it will take considerable growth in action to realize sustainability and climate resilience (e.g., Andonova, Hale, & Roger, 2017; Pattberg et al., 2012). “More will bring more” summarizes arguments that actions tend to be catalytic. The emphasis here is not on the sheer numbers of actions but on the potential for growth through replication and scaling, for instance, when nonstate actions promote new norms, build coalitions, and strengthen capacities (e.g., Bernstein & Hoffmann, 2018; Hale, 2017).

Actions could replicate or be replicated following a logic of appropriateness, especially among similar types of actors (Betzold, Bernauer, and Koubi 2016). As new norms become broadly supported, more actors will realign their activities. Such norm diffusion can be amplified through coalition building, identifying and linking winners, empowering proactive actors, creating or altering incentives, and reducing barriers. These mechanisms could widen and deepen transformations such as decarbonization (Bernstein & Hoffmann, 2018). Growing engagement also increases problem-solving capacities by leveraging resources and by pooling knowledge. Agenda 2030’s strong emphasis on partnerships that pool resources and knowledge from different sources assumes such

effects. Some actors, such as businesses and financial institutions, may see climate and sustainability actions as means to strengthen their own economic activities and competitiveness (Global Commission on the Economy and Climate, 2015, 2016).

Learning and experimentation play a critical role in convincing skeptical actors (Rietig and Perkins, 2018) through institutionalized sharing of experiences and linking nonstate actions to governmental processes (Abbott, 2017; Bernstein & Cashore, 2012). However, these opportunities should not imply that solutions are readily applicable. Experimentation may be more effective within one sector or one region with shared cultural and socioeconomic characteristics (Chan, Falkner, et al., 2018).

The growth of action also fluctuates, with mobilization campaigns organized around political moments (Pattberg et al., 2012). The close relation between action and political mobilization creates governance risks of its own. Mobilization campaigns are usually short-lived and emphasize nonstate promises rather than actual progress against targets. This raises the question of whether mobilization campaigns primarily generate promises without producing tangible progress (Figure 1).

Four optimistic assumptions: overview		
	Promises	Risks
<i>"The more the better"</i>	<ul style="list-style-type: none"> NSAs have the clout to enable change irrespective of what national governments do In aggregate, NSAs can help close gaps in governance 	<ul style="list-style-type: none"> Without clear accounting procedures, aggregations can lead to overestimations and policies based on erroneous inputs Aggregations can disregard actions that are not easily quantifiable, and may have negative consequences for other aspects of sustainability
<i>"Everybody wins"</i>	<ul style="list-style-type: none"> NSAs can provide knowledge and information for better policies NSAs can improve inclusivity and democratic quality By stimulating growth, innovation and employment, NSAs bring broad economic and sustainability benefits 	<ul style="list-style-type: none"> Due to imbalances in the geography of NSAs benefits may accrue in developed rather than developing countries NSAs could aggravate weak governance by creating new dependencies, crowding out public responsibilities, and too narrow focus on short-term interventions
<i>"Everyone does their part"</i>	<ul style="list-style-type: none"> NSAs can deliver scalable and replicable solutions and contributions to implementation All-hands-on-deck approach helps achieve urgent, time-bound, goals 	<ul style="list-style-type: none"> Strong reliance on NSAs can lead to imbalanced implementation and politically contentious outcomes. Effectiveness of actions is disputed, disingenuous actions may give the wrong signal, and undermine goals
<i>"More will bring more"</i>	<ul style="list-style-type: none"> NSAs are catalytic; they can stimulate more action by diffusing norms, building coalitions, and strengthening proactive actors NSAs can strengthen competitiveness and help actors anticipate a sustainable and climate-resilient future 	<ul style="list-style-type: none"> NSAs are not necessarily self-perpetuating, effects of learning and experimentation need to be considered, as well as the contingency of NSAs on specific cultural, economic and political contexts Growth of action will also depend on large-scale mobilisation and high-level political support

FIGURE 1 Arguments overview

[Correction added on 11 January 2019, after first online publication: Figure 1 and its citation have been added.]

3 | CONCLUSION AND DISCUSSION

Nonstate actions are portrayed as replicable, apolitical, win–win solutions, generating optimism and confidence. Enthusiastic arguments in their favour, however, should not prevent an honest appraisal of associated governance risks. The current emphasis on numbers suggests easy aggregation of impacts but ignores variegated effects of nonstate action. The claim that everybody benefits may easily be contradicted by outcomes unaligned with priorities and needs in developing countries. While nonstate efforts could and do complement governmental approaches, they can produce politically contentious outcomes, particularly when commitments are not kept, and some sustainability goals remain underaddressed. Finally, without efforts to stimulate learning and political momentum, the growth of nonstate action may be limited. Rather than responding to each risk individually, we suggest three combinable strategies to mitigate multiple risks.

First, an enabling environment can provide incentives for nonstate actors to engage, for instance, through improving access to knowledge, high-level recognition, material and immaterial support, and conveying that climate and sustainability action is doable. In the climate realm, the so-called "Talanoa Dialogue" was envisaged to provide an inclusive space for actors to exchange experiences. Such processes can help create shared understandings of needs and priorities and build trust. However, calls for coordination do not dissipate. Coordination can include promotion of action in underserved areas, for example, by signaling risks of duplication of efforts, facilitating collaboration where synergies exist, and addressing trade-offs. Coordination can also include the institutionalization of feedback mechanisms between international agendas and nonstate actors

(Hermwille, 2018; Persson, Weitz, & Nilsson, 2016). For example, “voluntary national reviews” of SDG implementation and 5-year reviews under the Paris Agreement could check the progress of nonstate actions and compatibility with sustainability goals.

Second, nonstate action needs to be grounded in national and regional contexts. Here, we see considerable variation across developed and developing countries, with much fewer recorded actions in the latter. The chief challenge is not to numerically balance out engagement. Imbalances may reflect uneven capacities and resources and different priorities. Instead, strengthening capabilities and fostering participation could help to empower developing country-based actors to take action. However, the onus should not only be on developing countries. Both the Paris Agreement and Agenda 2030 emphasize developed countries' responsibilities in implementation and international cooperation. This calls on all governments to gain broad societal support and buy-in from an array of constituencies.

Third, in all countries, the challenge is to stimulate action beyond “champions” and frontrunners. Frontrunners alone will not have the breath to further long-term transformations if others do not step up. Far-reaching transformations cannot be achieved without critical masses of engagement by actors that are not yet taking action. Moreover, large-scale transformations, like decarbonization, require painful choices. Governments need to bring to attention the ramifications of the sustainable and climate-resilient futures they have committed to and give nonstate actors a fair chance to adapt.

The relation between nonstate action and traditional governance may evolve differently across sustainable development and climate governance, likely calling for multiple and tailored strategies. Moreover, these strategies are not strictly related to policymaking but also prompt further research for better governance with nonstate actors, focusing on the many and complex interactions between actors in a fragmented governance environment (e.g., Zelli, 2011), how actions can be stimulated in the most critical areas, and how differences between and across types of actors may relate to governance risks. Specific knowledge will also be key to critically appraise geographically imbalanced outcomes of nonstate actions. When studying the novelty of observed phenomena, however, the stubbornness of old practices can easily be underestimated. It is therefore vital to study not only the increasing number of nonstate actions but also how consequential they are, whether they substitute unsustainable activities, and whether their scope is broad enough to generate systemic change.

ACKNOWLEDGMENTS

The authors greatly benefitted from the Interconnections Conference (12–13 May 2017), organized by the ‘Klimalog’ research and dialogue project for a climate smart and just transformation at the German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE), supported by the German Federal Ministry for Economic Cooperation and Development (BMZ), as well as from ‘Galvanizing the Groundswell of Climate Actions’, a series of open dialogues that aims to bring the groundswell of climate actions from cities, regions, companies and other groups to a higher level of scale and ambition.

CONFLICT OF INTEREST

The authors have declared no conflicts of interest for this article.

ENDNOTES

¹“Nonstate actors” refer to a broad and diverse category of stakeholders that are not UN member states. In the category of nonstate actors, we do not include individuals. For a definition of nonstate actors, see Bäckstrand et al. (2017, p. 564).

²This opinion builds on a dialogue on the interconnections between the 2030 Agenda for Sustainable Development and the Paris Agreement, originating from the “Interconnections Conference” held in Bonn in May 2017. This dialogue laid the basis for a reflection involving researchers, decision makers, and practitioners, with perspectives and experiences across developed and developing countries.

³By climate resilience, we denote low-carbon, adaptive, and resilience-building development.

⁴This process is not an analysis of the language that supports nonstate engagement (cf. Mert, 2015); rather, it is intended to elaborate on assumptions and related governance risks.

⁵Dialogue was facilitated during and following the 2017 Interconnections Conference (May 12–13, 2017) at the German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE), which aimed at an inclusive and transdisciplinary exploration the role of state, nonstate, and subnational actors across sustainability and climate governance among scholars, practitioners, and policymakers from developed and developing countries.

RELATED WIREs ARTICLES

[The fragmentation of the global climate governance architecture](#)
[Collective climate action and networked climate governance](#)

ORCID

Sander Chan  <https://orcid.org/0000-0001-7852-3838>

Idil Boran  <https://orcid.org/0000-0001-6832-152X>

FURTHER READING

- Bansard, J. S., Patberg, P. H., & Widerberg, O. (2017). Cities to the rescue? Assessing the performance of transnational municipal networks in global climate governance. *International Environmental Agreements: Politics, Law and Economics*, 17(2), 229–246.
- Bell, S., & Hindmoor, A. (2012). Governance without government? The case of the forestry stewardship council. *Public Administration*, 90(1), 144–159. <https://doi.org/10.1111/j.1467-9299.2011.01954.x>
- Bulkeley, H., Andonova, L. B., Betsill, M. M., Compagnon, D., Hale, T., Hoffmann, M. J., ... Roger, C. (2014). *Transnational climate change governance*. New York, NY: Cambridge University Press.
- Fraundorfer, M. (2017). The role of cities in shaping transnational law in climate governance. *Global Policy*, 8(1), 23–31. <https://doi.org/10.1111/1758-5899.12365>

REFERENCES

- Abbott, K. W. (2014). Strengthening the transnational regime complex for climate change. *Transnational Environmental Law*, 3(1), 57–88.
- Abbott, K. W. (2017). Orchestrating experimentation in non-state environmental commitments. *Environmental Politics*, 26(4), 738–763.
- Andonova, L. B., Hale, T. N., & Roger, C. B. (2017). National policy and transnational governance of climate change: substitutes or complements? *International Studies Quarterly*, 61(2), 253–268.
- Anenberg, S. C., Balakrishnan, K., Jetter, J., Masera, O., Mehta, S., Moss, J., & Ramanathan, V. (2013). Cleaner cooking solutions to achieve health, climate, and economic cobenefits. *Environmental Science & Technology*, 47(9), 3944–3952. <https://doi.org/10.1021/es304942e>
- Atteridge, A. (2011). *Will private finance support climate change adaptation in developing countries? Historical investment patterns as a window on future private climate finance* (Working Paper). Stockholm Environment Institute, Stockholm.
- Bäckstrand, K., & Kuyper, J. W. (2017). The democratic legitimacy of orchestration: The UNFCCC, non-state actors, and transnational climate governance. *Environmental Politics*, 26(4), 764–788.
- Bäckstrand, K., Kuyper, J. W., Linnér, B. O., & Lövbrand, E. (2017). Non-state actors in global climate governance: From Copenhagen to Paris and beyond. *Environmental Politics*, 26.4, 561–579.
- Beisheim, M., & Liesse, A. (2014). *Transnational partnerships: Providing for sustainable development?* UK: Palgrave Macmillan.
- Bernstein, S., & Cashore, B. (2012). Complex global governance and domestic policies: Four pathways of influence. *International Affairs*, 88(3), 585–604.
- Bernstein, S., & Hoffmann, M. (2018). The politics of decarbonization and the catalytic impact of subnational climate experiments. *Policy Sciences*, 51(2), 189–211.
- Betzold, C., Bernauer, T., & Koubi, V. (2016). Press briefings in international climate change negotiations. *Environmental Communication*, 10(5), 575–592.
- Bloomberg Philanthropies. (2017). *America's pledge phase 1 report states, cities, and businesses in the united states are stepping up on climate action*. Retrieved from <https://www.bbhub.io/dotorg/sites/28/2017/11/AmericasPledgePhaseOneReportWeb.pdf>
- Börzel, T. A., & Risse, T. (2010). Governance without a state: Can it work? *Regulation & Governance*, 4, 113–134. <https://doi.org/10.1111/j.1748-5991.2010.01076.x>
- Bulkeley, H., Andonova, L., Bäckstrand, K., Betsill, M., Compagnon, D., Duffy, R., ... Van Deveer, S. (2012). Governing climate change transnationally: Assessing the evidence from a database of sixty initiatives. *Environment and Planning, C, Government & Policy*, 30(4), 591–612.
- Chan, S., Asselt, H., Hale, T., Abbott, K. W., Beisheim, M., Hoffmann, M., ... Pauw, P. (2015). Reinvigorating international climate policy: A comprehensive framework for effective nonstate action. *Global Policy*, 6(4), 466–473.
- 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.
- Chan, S., Ellinger, P., & Widerberg, O. (2018). Exploring national and regional orchestration of non-state action for a < 1.5° C world. *International Environmental Agreements: Politics, Law and Economics*, 18(1), 135–152.
- Figueres, C., Schellnhuber, H. J., Whiteman, G., Rockström, J., Hobley, A., & Rahmstorf, S. (2017). Three years to safeguard our climate. *Nature*, 546(7660), 593–595. <https://doi.org/10.1038/546593a>
- Global Commission on the Economy and Climate. (2015). *New climate economy report: Seizing the global opportunity: Partnerships for better growth and a better climate*. London, England: New Climate Economy.
- Global Commission on the Economy and Climate. (2016). *New climate economy report the sustainable infrastructure imperative: Financing for better growth and development*. London, England: New Climate Economy.
- 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, Germany: Öko-Institut.
- Hale, T., & Roger, C. (2014). Orchestration and transnational climate governance. *The Review of International Organizations*, 9(1), 59–82.
- Hale, T. (2016). “All hands on deck”: The Paris agreement and nonstate climate action. *Global Environmental Politics*, 16(3), 12–22.
- Hale, T. (2017). *Tragedy or tipping point? Catalytic Institutions for the global commons* (Working Paper), Blavatnik School of Government Research Seminar.
- Hale, T., Held, D., Brown, G. W., Clarke, M., Villard Duran, C., Florini, A., ... Young, K. (2017). *Beyond gridlock*. Cambridge, England: Polity Press.
- Hermwille, L. (2018). Making initiatives resonate: How can non-state initiatives advance national contributions under the UNFCCC? *International Environmental Agreements: Politics, Law and Economics*, 18(3), 447–466.
- Hickmann, T. (2017). The reconfiguration of Authority in Global Climate Governance. *International Studies Review*, 19(3), 430–451.
- Hsu, A., Moffat, A. S., Weinfurter, A. J., & Schwartz, J. D. (2015). Towards a new climate diplomacy. *Nature Climate Change*, 5(6), 501–503. <https://doi.org/10.1038/nclimate2594>
- Hsu, A., Widerberg, O., Weinfurter, A., Chan, S., Roelfsema, M., Lütkehermöller, K., & Bakhtiari, F. (2018). *Bridging the emissions gap - The role of non-state and subnational actors*. The Emissions Gap Report 2018. A UN Environment Synthesis Report. Nairobi: United Nations Environment Programme.

- Hsu, A., Cheng, Y., Weinfurter, A., Xu, K., & Yick, C. (2016). Track climate pledges of cities and companies. *Nature*, 532, 303–306.
- Jacobs, M. (2016). High pressure for low emissions: How civil society created the Paris climate agreement. *Juncture*, 22(4), 314–323.
- Kuyper, J. W., Linnér, B.-O., & Schroeder, H. (2017). Non-state actors in hybrid global climate governance: Justice, legitimacy, and effectiveness in a post-Paris era: Non-state actors in hybrid global climate governance. *WIREs Climate Change*, 9(1), 1–18. <https://doi.org/10.1002/wcc.497>
- McCollum, D. L., Echeverri, L. G., Busch, S., Pachauri, S., Parkinson, S., Rogelj, J., ... Riahi, K. (2018). Connecting the sustainable development goals by their energy inter-linkages. *Environmental Research Letters*, 13(3), 033006.
- Mert, A. (2015). *Environmental governance through partnerships: A discourse theoretical study*. Cheltenham, UK: Edward Elgar.
- Mert, A. (forthcoming). *Participation (s) in transnational environmental governance: Green values versus instrumental use, environmental values*.
- Michaelowa, K., & Michaelowa, A. (2017). Transnational climate governance initiatives: Designed for effective climate change mitigation? *International Interactions*, 43(1), 129–155.
- Michaelena, E., & Hills, J. M. (2018). Paths of renewable energy development in small Island developing states of the South Pacific. *Renewable and Sustainable Energy Reviews*, 82(Part 1), 343–352. <https://doi.org/10.1016/j.rser.2017.09.017>
- Nasiritousi, N., Hjerpe, M., & Linnér, B.-O. (2016). The roles of non-state actors in climate change governance: Understanding agency through governance profiles. *International Environmental Agreements: Politics, Law and Economics*, 16(1), 109–126. <https://doi.org/10.1007/s10784-014-9243-8>
- Nasiritousi, N. (2017). Fossil fuel emitters and climate change: Unpacking the governance activities of large oil and gas companies. *Environmental Politics*, 26(4), 621–647.
- Obama, B. (2017). The irreversible momentum of clean energy. *Science*, 355(6321), 126–129. <https://doi.org/10.1126/science.aam6284>
- Obergassel, W., Peterson, L., Mersmann, F., Schade, J., Hofbauer, J. A., & Mayrhofer, M. (2017). Human rights and the clean development mechanism: Lessons learned from three case studies. *Journal of Human Rights and the Environment*, 8(1), 51–71.
- Pattberg, P. H., Biermann, F., Chan, S., & Mert A. (Eds.). (2012). *Public-private partnerships for sustainable development: Emergence, influence and legitimacy*. Cheltenham, UK: Edward Elgar.
- Pauw, P., & Pegels, A. (2013). Private sector engagement in climate change adaptation in least developed countries: An exploration. *Climate and Development*, 5(4), 257–267.
- Persson, Å., Weitz, N., & Nilsson, M. (2016). Follow-up and review of the sustainable development goals: Alignment vs. internalization. *Review of European, Comparative & International Environmental Law*, 25(1), 59–68.
- Ponte, S., & Chenys, E. (2013). Voluntary standards, expert knowledge and the governance of sustainability networks. *Global Networks*, 13, 459–477. <https://doi.org/10.1111/glob.12011>
- Rietig, K., & Perkins, R. (2018). Does learning matter for policy outcomes? The case of integrating climate finance into the EU budget. *Journal of European Public Policy*, 25(4), 487–505.
- Roelfsema, N., Harmsen, M., Olivier, J. J. G., Hof, A. F., & Van Vuuren, D. P. (2018). Integrated assessment of international climate mitigation commitments outside the UNFCCC. *Global Environmental Change*, 48, 67–75.
- Rogelj, J., Den Elzen, M., Höhne, N., Fransen, T., Fekete, H., Winkler, H., ... Meinshausen, M. (2016). Paris agreement climate proposals need a boost to keep warming well below 2 C. *Nature*, 534(7609), 631–639.
- Schroeder, H. (2010). Agency in international climate negotiations: The case of indigenous peoples and avoided deforestation. *International Environmental Agreements: Politics, Law and Economics*, 10(4), 317–332.
- Setzer, J. (2015). Testing the boundaries of subnational diplomacy: The international climate action of local and regional governments. *Transnational Environmental Law*, 4(2), 319–337.
- Suiseeya, K. R. M. (2017). Contesting justice in global Forest governance: The promises and pitfalls of REDD+. *Conservation and Society*, 15(2), 189.
- Scobie, M. (2016). Policy coherence in climate governance in Caribbean Small Island developing states. *Environmental Science & Policy*, 58, 16–28. <https://doi.org/10.1016/j.envsci.2015.12.008>
- Tosun, J., & Schoenefeld, J. J. (2017). Collective climate action and networked climate governance. *WIREs Climate Change*, 8(1), e440.
- UNEP. (2016). *The emissions gap report 2016*. Nairobi, Kenya: Author.
- UNEP. (2017). *The emissions gap report 2017*. Nairobi, Kenya: Author.
- UNFCCC. (2018). *Yearbook of global climate action*. Bonn, Germany: United Nations Climate Change Secretariat.
- Van Asselt, H. (2016). The role of non-state actors in reviewing ambition, implementation, and compliance under the Paris agreement. *Climate Law*, 6(1–2), 91–108.
- Von Stechow, C., McCollum, D., Riahi, K., Minx, J. C., Kriegler, E., Van Vuuren, D. P., ... Mirasgedis, S. (2015). Integrating global climate change mitigation goals with other sustainability objectives: A synthesis. *Annual Review of Environment and Resources*, 40, 363–394.
- 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.
- Wright, C., & Nyberg, D. (2015). *Climate change, capitalism, and corporations: Processes of creative self-destruction*. Cambridge: Cambridge University Press.
- Zelli, F. (2011). The fragmentation of the global climate governance architecture. *WIREs Climate Change*, 2(2), 255–270.

How to cite this article: Chan S, Boran I, van Asselt H, et al. Promises and risks of nonstate action in climate and sustainability governance. *WIREs Clim Change*. 2019;e572. <https://doi.org/10.1002/wcc.572>