



Transparency requirements under the Paris Agreement and their (un)likely impact on strengthening the ambition of nationally determined contributions (NDCs)

Romain Weikmans, Harro van Asselt & J. Timmons Roberts

To cite this article: Romain Weikmans, Harro van Asselt & J. Timmons Roberts (2019): Transparency requirements under the Paris Agreement and their (un)likely impact on strengthening the ambition of nationally determined contributions (NDCs), *Climate Policy*, DOI: [10.1080/14693062.2019.1695571](https://doi.org/10.1080/14693062.2019.1695571)

To link to this article: <https://doi.org/10.1080/14693062.2019.1695571>



Published online: 26 Nov 2019.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

SYNTHESIS ARTICLE



Transparency requirements under the Paris Agreement and their (un)likely impact on strengthening the ambition of nationally determined contributions (NDCs)

Romain Weikmans ^a, Harro van Asselt ^{b,c} and J. Timmons Roberts ^d

^aInstitute for Environmental Management and Land Use Planning, Université Libre de Bruxelles / Free University of Brussels, Brussels, Belgium; ^bLaw School, University of Eastern Finland, Joensuu, Finland; ^cStockholm Environment Institute, Oxford, UK; ^dInstitute for Environment & Society, Brown University, Providence, RI, USA

ABSTRACT

How will the Paris Agreement drive countries to address climate change? One expectation of the Agreement is that transparency will stimulate countries to increase the ambition of their pledges by revealing information on Parties' climate efforts. To this end, the Agreement introduced a new 'enhanced transparency framework' (ETF) to report and review information on Parties' greenhouse gas emissions, progress made in implementing and achieving nationally determined contributions (NDCs), their adaptation actions, and the financial, technological and capacity-building support needed, received and provided to developing country Parties. However, this relationship between transparency and progressive ambition over time remains largely untested. In this article, we first outline several pathways through which increased transparency could potentially lead to increased ambition. These pathways notably depend on the availability of comparable, complete and timely information on the performance of Parties. By reviewing the experience with past and existing transparency arrangements, we identify four types of challenges that will likely pose barriers to the generation of such information by the ETF, and suggest some efforts that might address these challenges to support greater ambition in future rounds of NDCs.

Key policy insights

- The potential use of the flexibilities offered to developing countries on some dimensions of the ETF may lead to the generation of incomplete and incomparable information.
- It will be difficult to assess and compare progress made by Parties towards achieving their NDCs due to heterogeneous, qualitative and conditional NDCs; the variety of indicators that Parties will choose to track their progress; and to weaknesses in the reporting guidelines on climate action and support.
- Despite ongoing efforts to address this, the information generated by the ETF may be outdated and non-comprehensive due to capacity gaps.
- The apolitical design of the ETF means that it will not lead to judgments, for example on the level of ambition of an NDC, or even on whether a country is achieving its NDC. The ETF is also not equipped to deal with cases of political unwillingness to participate in the ETF itself.

ARTICLE HISTORY

Received 24 April 2019
Accepted 15 November 2019

KEYWORDS

Transparency; climate change; nationally determined contributions; UNFCCC; Paris Agreement

1. Introduction

At the core of the 2015 Paris Agreement is the idea that nations of the world, on a voluntary basis, make promises through their nationally determined contributions (NDCs) to reduce greenhouse gas (GHG) emissions and

adapt to the impacts of climate change. To assess whether states are living up to these promises, transparency – in the form of reporting information on progress made, and a review of this information – is crucial. To this end, the Paris Agreement in its Article 13 introduced a new ‘enhanced transparency framework’ (ETF) to report and review information on Parties’ GHG emissions, progress made in implementing and achieving NDCs, adaptation actions, and the financial, technological and capacity-building support needed, received and/or provided to developing country Parties. In December 2018, Parties reached agreement on detailed rules to put the transparency framework into practice (UNFCCC, 2019a).

Transparency has been held up as a key driver for action in the bottom-up governance architecture of the Paris Agreement (see e.g. Ciplet & Roberts, 2017; Ciplet, Adams, Weikmans, & Roberts, 2018; Gupta & Mason, 2016; Jacquet & Jamieson, 2016; Karlsson-Vinkhuyzen et al., 2018; van Asselt, 2016). By revealing information on Parties’ efforts towards mitigation, adaptation, and provision of support, the expectation is that transparency stimulates countries to increase the ambition of their NDCs. But how?

To address this critical issue, we collected and analyzed decisions related to transparency taken pursuant to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. We also reviewed the academic and grey literatures on transparency in international climate governance. Our analysis has been informed by our fifteen years of field research following and engaging in debates about transparency in the international negotiations on climate change.

This article first outlines several pathways through which increased transparency could potentially lead to increased ambition (section 2). It then examines the extent to which the features of the Paris Agreement’s ETF (detailed in section 3) make it likely for these pathways to materialize (section 4).

2. Pathways for increasing ambition through transparency

There are several pathways through which transparency could drive greater climate ambition. First, greater clarity on a country’s performance – through the monitoring and reporting of GHG emissions and progress towards climate targets – could directly incentivise a country to do more. The rationale behind that expectation is that the effort of planning for, collecting, and reporting basic data on performance towards climate goals (of emission reductions, adaptation efforts, and the provision of financial and other support) could make apparent to government officials, politicians and civil servants the gap between promises and action, or in the case that promises are being met, to increased understanding on how ambition could be enhanced. On emissions reductions, there is a widespread expectation that these transparency efforts will make it impossible to ignore the gap between existing policies and measures and those needed to be on a pathway of decarbonization compatible with global efforts to remain below 1.5°C or 2°C. Furthermore, such an analysis might point officials to the way in which existing policies and programmes can be enhanced to shift their nations or regions closer to or onto those pathways, and advance the effort to delineate benefits of doing so.

Second, information generated through better transparency arrangements could be used by non-state actors internationally, to attempt to ‘name and shame’ laggards or ‘name and fame’ the best performers. Various researchers (e.g. Duyck, 2015; Karlsson-Vinkhuyzen et al., 2018; Kingston, 2019; Milkoreit & Haapala, 2019; van Asselt, 2016) have pointed to the influential role that independent assessments by non-state actors can play outside of the formal review processes of the UNFCCC. For example, in the run-up to the Paris Climate Conference, various researchers, think tanks and other civil society organizations published analyses of the ambition level of intended nationally determined contributions (INDCs) submitted by Parties. Examples include the work carried out by Climate Action Tracker¹ and the Civil Society Equity Review.² Such informal reviews of the individual ambition of pre-Paris national pledges and of their potential aggregate effect were discussed in the media, cited by other international civil society organizations, and debated in the corridors of the negotiations (van Asselt, 2016). They contributed to boosting the argument that greater ambition was needed, given that INDCs were not nearly sufficient to limit global temperature increase to 2°C above pre-industrial levels (Milkoreit & Haapala, 2019).

Third, since national politicians are largely driven by domestic politics, the key element is that the publication of data internationally on a nation’s efforts and pledges should be picked up by domestic actors (e.g. civil society

organizations, opposition parliamentarians, national auditors, subnational authorities) to put pressure on their governments. This can be both through public shaming or through direct lobbying, but might also be taken up through the numerous types of litigation arising over climate change's impacts and the failure of governments to adequately address the issue (see e.g. Karlsson-Vinkhuyzen et al., 2018; Karlsson-Vinkhuyzen & van Asselt, 2015; van Asselt, 2016).

Fourth, reporting and review could allow other countries to put pressure on a country to increase its ambition. Greater clarity on how a country has implemented and achieved its NDC could highlight to a country that it needs to, or could, do more to avoid reputational costs (Ciplet et al., 2018; Ciplet & Roberts, 2017; Falkner, 2016; Jacquet & Jamieson, 2016; Karlsson-Vinkhuyzen et al., 2018). This pathway rests on the idea that 'states care about collective judgment of their conduct because they have an interest in reciprocal compliance by and future cooperation with others' (Johnstone, 2005, p. 187).

Fifth, transparency on international support, and climate finance in particular, is key, as ambitious mitigation action by developing nations partially depends on broadly-held perceptions of equitable action by developed countries (see Khan, Robinson, Weikmans, Ciplet, & Roberts, 2019; Roberts & Weikmans, 2017; Pauw, Castro, Pickering, & Bhasin, [this issue](#)). Delivering on finance promises – and there being confidence also in the validity of the claims of amounts delivered – are especially crucial for developing nations to accept that the conditionalities in their NDCs have been met and that they can put in place more ambitious mitigation targets. In addition, transparency on the future provision of climate finance may encourage developing countries to strengthen the ambition of their future NDCs because they will have greater confidence that their climate action will receive support.

Sixth and finally, complete and transparent information as an input to the Paris Agreement's five-yearly global stocktake will form part of the evidence that will almost certainly show that the world is off-track from its goal of keeping warming well below 2°C. This could in turn lead to the call for greater ambition, especially focusing on the central role of large emitters and wealthy nations who might be expected to lead on climate change.

3. Transparency arrangements in the international climate regime

While its profile has risen significantly, transparency is not a new issue: the Paris transparency framework is the latest stage in the development of transparency arrangements under the UNFCCC that dates back to 1992. This section provides a brief historical overview and then analyses the new provisions associated with the Paris Agreement's ETF. [Table 1](#) provides a glossary of key acronyms used in this section.

Table 1. Glossary of key acronyms.

BRs	Biennial reports	Under the UNFCCC, BRs are reports that developed country Parties are requested to submit to the UNFCCC secretariat every two years. The reports include information on progress in achieving emission reductions, projected emissions and the provision of financial, technology and capacity-building support to developing country Parties
BTRs	Biennial transparency reports	Under the Paris Agreement, BTRs are reports that developed and developing country Parties are requested to submit to the UNFCCC secretariat every two years. The first BTRs are to be submitted at the latest by 31 December 2024. Least Developed Countries (LDCs) and Small Island Developing States (SIDS) can submit these reports at their discretion.
BURs	Biennial update reports	Under the UNFCCC, BURs are reports that developing country Parties are requested to submit to the UNFCCC secretariat every two years. LDCs and SIDS can submit these reports at their discretion. The reports include information on emissions and removals by sinks, and on actions to implement the Convention.
ETF	Enhanced transparency framework	The ETF comprises the transparency arrangements of the Paris Agreement.
FMCP	Facilitative, multilateral consideration of progress	The FMCP is a state-to-state review process under the Paris Agreement's ETF. It focuses on the implementation and achievement of NDCs as well as the obligations related to the provision of support to developing country Parties.
MPGs	Modalities, procedures and guidelines	The MPGs contain the details that operationalize the Paris Agreement's ETF.

3.1. Reporting and review under the UNFCCC

The 1992 UNFCCC requires all Parties to submit regular reports (UNFCCC, 1992, Articles 4.1(a) and 12). These obligations were heavily contested, with developing countries reluctant to take on potentially burdensome reporting commitments (Bodansky, 1993). This tension was resolved by differentiating the reporting obligations.

The reports providing information on policies and measures to implement the Convention – known as national communications – by Annex I (developed country) Parties are subject to detailed requirements. Moreover, Annex I Parties are required to submit national communications every four years. By contrast, the national communications from non-Annex I (developing country) Parties are subject to less detailed guidelines, are not bound to a specific timetable, and their submission is conditional on the provision of full funding by developed countries.

The Convention also requires Annex I Parties to submit annual GHG inventories. Parties need to follow the Intergovernmental Panel on Climate Change's (IPCC) 2006 Guidelines in preparing their inventories (IPCC, 2006) and adhere to the following criteria (UNFCCC, 2014):

- *Transparency*: assumptions and methodologies should be clearly explained.
- *Accuracy*: estimates of emissions or removals should be as exact as possible, and uncertainties reduced as much as possible.
- *Consistency*: inventories should be internally consistent with previous inventories.
- *Comparability*: inventories should be comparable across Annex I Parties.
- *Completeness*: inventories should cover all sources and sinks, all gases, and the entire territory of a Party.

By contrast, non-Annex I Parties are not required to submit annual inventories, but they can include the results of their inventories in their national communications. Moreover, they have flexibility in the reporting format and methods (e.g. they can choose to use IPCC guidelines from 1996).

The question of review of implementation was likewise a sensitive one at the time the Convention was negotiated, with developing countries wary of any process that would be too intrusive (Bodansky, 1993). At the first Conference of the Parties (COP), Parties agreed on a process of 'in-depth review' for Annex I Parties' national communications, excluding non-Annex I Parties from such a review. Moreover, since 2003, each Annex I Party inventory has been subject to a technical expert review. The reviews vary in intensity, with desk-based and centralized reviews being carried out from abroad, and in-country reviews including a visit to the country under review.

3.2. Reporting and review under the Kyoto Protocol

With the introduction of individual GHG emissions targets for developed countries in the 1997 Kyoto Protocol, new transparency arrangements were put in place (UNFCCC, 2006). Developed countries are required to report annually on (and demonstrate compliance with) their emission limitation or reduction targets. The introduction of market mechanisms (such as the Clean Development Mechanism) increased the crucial role of emissions accounting for the environmental integrity of the treaty. The information in these reports is therefore more detailed than that contained in the national communications. These reports are also reviewed by expert review teams. In this process, the reviews of national communications and GHG inventories of Annex I Parties that are also Parties to the Kyoto Protocol are combined.

A key difference between the review under the Kyoto Protocol and the UNFCCC is that, under the former, expert review teams can raise 'questions of implementation'. If these questions cannot be resolved by the Party in question, an expert review team can refer the matter to the Kyoto Protocol's Compliance Committee, which can adopt various measures to promote compliance.

3.3. Reporting and review under the Cancún Agreements

The 2009 Copenhagen Accord offered a blueprint for future international climate policy, not only by introducing voluntary climate pledges for developed and developing countries, but also by signalling a new direction for transparency arrangements under the UNFCCC. These arrangements were fleshed out and formally decided upon in the Cancún Agreements (UNFCCC, 2011), adopted one year later. With the Cancún Agreements, the requirements related to reporting and review of developed and developing countries became increasingly similar. This shift was supported by developed countries, but initially opposed by developing countries such as China and India. With developed countries agreeing on greater transparency of the financial and other support they provided, developing countries also accepted greater scrutiny of their actions (Morgan et al., 2010).

The 2010 Cancún Agreements specify that Annex I Parties need to submit new biennial reports (BRs), either independently or together with their national communications. The Cancún Agreements also introduced new obligations and processes for developing country Parties, who agreed to submit biennial update reports (BURs) from 2014 onwards – with the exception of Least Developed Countries (LDCs) and Small Island Developing States (SIDS), who can do so at their discretion (UNFCCC, 2012).

The BRs from developed countries are subject to a process of international assessment and review, which combines a technical expert review with a peer-to-peer process called multilateral assessment. The technical review of BRs resembles the review of national communications and GHG inventories. The multilateral assessment draws on the technical review, the Party's reports, and supplementary information. Other Parties can submit written questions or raise questions in a session of the Subsidiary Body for Implementation (SBI), providing for an opportunity to publicly discuss other countries' climate actions.

Importantly, also the BURs from developing countries are subject to a review process under the SBI, called international consultation and analysis. Its aim is to enhance transparency through a process that is non-confrontational and non-intrusive, and that respects national sovereignty. The process mirrors the two steps of the international assessment and review, starting with an analysis of BURs by a team of technical experts, in consultation with a Party. Based on the experts' report, a facilitative sharing of views takes place, also allowing for questions and answers between Parties. This is significant, as it represents the first time that developing countries have been subject to some kind of public scrutiny. For the purposes of the international consultation and analysis, LDCs and SIDS can be analyzed in groups, rather than individually, although no group of Parties has availed itself of this possibility to date.

3.4. Reporting and review under the Paris Agreement

The ETF established by the Paris Agreement will supersede the Cancún transparency arrangements immediately following the submission of the final BRs (no later than in 2022) and BURs (no later than in 2024). The ETF follows the model of the Cancún Agreements by providing for biennial reporting, followed by a technical expert review and state-to-state review process (see Table 2). However, in contrast with the existing transparency arrangements, the ETF is applicable to *all* Parties. Rather than specifying different processes for developed and developing countries, the ETF provides for 'built-in flexibility' that takes into account Parties' different capacities (Article 13.2). This crucial provision was specified in the modalities, procedures and guidelines (MPGs) agreed by Parties at the Katowice Climate Conference in December 2018. Parties decided then that it will be up to each developing country Party to self-determine if it needs flexibility (UNFCCC, 2019a, Annex, paragraph 6). However, flexibility is only available for specific elements concerning the scope, frequency and level of detail of reporting and review (see section 4.1). In addition to these flexibilities, the MPGs specify on several occasions that LDCs and SIDS have further discretion in the implementation of their obligations.

3.4.1. Reporting

The MPGs (UNFCCC, 2019a, Annex) contain details on the information that Parties have to report under the ETF (see Table 3). Parties need to submit their first biennial transparency report (BTR) and national inventory report, if submitted as a stand-alone report, in accordance with the new MPGs at the latest by 31 December 2024. LDCs and SIDS can submit these various reports at their discretion.

Table 2. UNFCCC and Paris Agreement transparency arrangements compared.

	UNFCCC	Paris Agreement
Reporting		
<i>Greenhouse gas inventories</i>	<i>Who:</i> All Parties <i>Frequency:</i> Every year for developed countries; Every two years for developing countries; Flexibility for LDCs and SIDS	<i>Who:</i> All Parties <i>Frequency:</i> Every year for developed countries; Every two years for developing countries; Flexibility for LDCs and SIDS <i>Scope:</i> Flexibility for developing countries that need it in light of their capacities
<i>National Communications</i>	<i>Who:</i> All Parties <i>Frequency:</i> Every four years for developed countries; Developing countries encouraged to do the same, depending on support <i>Scope:</i> Information on support only mandatory for developed countries <i>Guidelines:</i> Different reporting guidelines for developed and developing countries	No new provisions; UNFCCC continues to apply
<i>Biennial Reports</i>	<i>Who:</i> All Parties <i>Frequency:</i> Every two years <i>Scope:</i> Information on support only mandatory for developed countries <i>Guidelines:</i> Different reporting guidelines for developed and developing countries	<i>Who:</i> All Parties <i>Frequency:</i> At least every two years; Flexibility for LDCs and SIDS, and developing countries that need it in light of their capacities <i>Scope/level of detail:</i> Flexibility for developing countries that need it in light of their capacities
Review		
<i>Review of GHG inventories</i>	<i>Who:</i> Developed countries; Review of developing country inventories part of technical review of BUR	<i>Who:</i> Developed countries; Review of developing country inventories part of technical review of BTR <i>Scope:</i> Simplified review for National Inventory Report in years when no BTR is due
<i>In-depth review of National Communications</i>	<i>Who:</i> Developed countries	No new provisions; UNFCCC continues to apply
<i>Technical expert analysis/ review of biennial reports</i>	<i>Who:</i> All Parties <i>Guidelines:</i> Different guidelines for review of developed and developing country reports	<i>Who:</i> All Parties <i>Scope:</i> Flexibility for developing countries that need it in light of their capacities
<i>Multilateral review/ consideration</i>	<i>Who:</i> All Parties <i>Guidelines:</i> Different guidelines for review processes of developed and developing countries; Review voluntary for LDCs and SIDS, who can also be reviewed as group	<i>Who:</i> All Parties <i>Scope:</i> Flexibility for developing countries that need it in light of their capacities; Review voluntary for LDCs and SIDS, who can also be reviewed as group

Source: Adapted from Briner and Moarif (2016).

The national inventory report consists of a national inventory document and common reporting tables (i.e. common templates used by Parties to organize reported data). All Parties are required to follow the IPCC Guidelines for GHG inventories and, as such, they are required to follow the methodologies for estimating emissions and removals specified in those guidelines. Overall, the reporting requirements resemble those for Annex I country inventory reporting under the UNFCCC, meaning that for non-Annex I countries the requirements are significantly more stringent than before (Dagnet, Cogswell, Bird, Bouyé, & Rocha, 2019).

To track progress in implementing and achieving NDCs, Parties are required to: describe their NDCs, including possible updates; identify qualitative and/or quantitative indicators for tracking progress (e.g. net GHG emissions and removals); provide recent information on these indicators and compare this with baseline information; and describe the methodologies and accounting approaches used for the targets, baselines and indicators. Moreover, the first BTR containing information on the end year or end of the period of a Party's NDC needs to include an assessment of whether the Party has achieved its target(s). To facilitate the synthesis of information, each Party is required to include a 'structured summary' in its BTR.

In addition to the information necessary to track progress in achieving their NDCs, Parties are also required to provide information on the actions, policies and measures that support the implementation and achievement of their NDCs, including information on estimates of expected and achieved GHG emissions reductions. Developing country Parties that need flexibility in the light of their capacities are merely 'encouraged' to provide this information. Likewise, while Parties are required to offer projections on the impact of mitigation policies and

Table 3. Parties' obligations under the enhanced transparency framework.**Reporting**

- Each Party shall provide a National Inventory Report
- Each Party shall provide the information necessary to track progress in implementing and achieving its NDC
- Each Party should provide information on climate impacts and adaptation
- Each developed country Party shall and each other Party providing support should provide information on support provided
- Each developing country Party should provide information on support needed and received

Review*Technical expert review*

- Each Party shall undergo a technical expert review of greenhouse gas inventory and information on progress towards its NDC
- Each Party shall undergo a technical expert review of information on support provided

Facilitative, multilateral consideration of progress

- Each Party shall undergo a facilitative, multilateral consideration of progress on the implementation and achievement of its NDC
- Each Party shall undergo a facilitative, multilateral consideration of its efforts related to support provided

Source: Based on UNFCCC (2019a, Annex).

Note: Flexibilities on specific MPGs are available to LDCs and SIDS, and to other developing country Parties that need it in the light of their capacities (see section 4.1 below).

measures on future trends in GHG emissions and removals, this information is voluntary for developing country Parties that need flexibility.

Providing information on climate change impacts and adaptation is not mandatory (see UNFCCC, 2016, Article 7.10; Moehner & Goldberg, [this issue](#)). Nonetheless, Parties are requested to report information on, among others, trends and hazards, observed and potential impacts, adaptation priorities and challenges, and adaptation actions and their implementation. Moreover, Parties may provide information on loss and damage associated with climate impacts.

On financial, technology transfer and capacity-building support, a key change brought about by the Paris Agreement's ETF is that developing countries that provide support to other developing countries in the context of climate actions should report information on such support on a biennial basis. Another key difference with the pre-Paris approach is that developing countries should now provide information on financial, technology transfer and capacity-building support received every two years – except for LDCs and SIDS, which may submit this information at their discretion. Previously, developing countries were only encouraged to report such information in their national communications and BURs.

Lastly, the Paris Agreement's reporting rules interrelate with the provision of information on financial (Article 9), technology transfer (Article 10) and capacity building (Article 11) support provided to developing countries, and needed and received by developing countries. Notably, Article 9.5 of the Paris Agreement concerns the communication of ex-ante projections of future funding. It calls on Parties providing resources to biennially communicate indicative quantitative and qualitative information on financial support, including as available on projected levels of public financial resources to be provided to developing countries.

3.4.2. Review

Following the example of the Cancún transparency arrangements, the review process under the ETF will include a technical expert review and a process of 'facilitative, multilateral consideration of progress' (see [Table 3](#)). The expert reviewers will examine the consistency of the reported information with transparency guidelines, and identify 'areas of improvement' for the Party under review. The facilitative, multilateral consideration of progress (FMCP) focuses on the implementation and achievement of NDCs as well as the obligations related to the provision of support to developing country Parties. The MPGs contain various details on those two processes, including on their scope, format and timing (UNFCCC, 2019a).

The ETF is linked to two other review processes under the Paris Agreement: the five-yearly global stocktake (Article 14) and the mechanism to facilitate implementation of, and promote compliance with, the provisions of the Paris Agreement (Article 15). Regarding the global stocktake, Parties in Katowice decided that the sources of input for the global stocktake will include reports by individual Parties such as BTRs (UNFCCC, 2019b, paragraph

37a). However, it is unclear whether expert review reports and summaries of the FMCP for individual Parties will also serve as formal sources of input.

The mechanism referred to in Article 15 of the Paris Agreement consists of a committee that will initiate a ‘facilitative consideration of issues’ in case a Party has not submitted a mandatory report under the ETF or has not participated in the facilitative, multilateral consideration of progress. In addition, the Article 15 Committee may begin a ‘facilitative consideration of issues’ in case of ‘significant and persistent inconsistencies’ between a Party’s report and the Article 13 MPGs (UNFCCC, 2019c, Annex, paragraph 22). Such a consideration is to be based on ‘recommendations’ in technical expert review reports – which can only be given for provisions couched in terms of ‘shall’ in the MPGs – and requires the consent of the Party concerned. Moreover, the flexibilities for developing country Parties that need it in the light of their capacities need to be taken into account.

4. Challenges for strengthening climate ambition through the ETF

The pathways for increasing ambition through transparency described in section 2 notably depend on the availability of comparable, complete and timely information on the performance of Parties in terms of climate action and provision of support. In this section we distinguish between four types of challenges that will likely pose barriers to the generation of such information by the ETF. We discuss each of these four sets of limitations in light of the experience with transparency arrangements in the climate regime.

In addition to these four challenges, it is important to highlight that the timing of the transition to the new ETF means that at least some of the information that it is supposed to reveal will not be available in time for the preparation of the next round of NDCs, which most countries are expected to submit in 2020. Parties are expected to submit their first BTR and national inventory report, if submitted as a stand-alone report, at the latest by 31 December 2024, so just ahead of the third round of NDCs.

4.1. Differentiation

Differentiation has played a major role in determining the shape of transparency. Historically, the bifurcation between Annex I and non-Annex I Parties under the UNFCCC has posed barriers to extending the same transparency rules to all Parties, limiting the generation of information and its comparability (Ellis & Moarif, 2015). Over time, however, transparency arrangements for developed and developing countries have converged gradually. As detailed above, the Paris Agreement establishes a single transparency framework applicable to all Parties, with some flexibilities for developing countries related to their capacities, and further flexibilities for LDCs and SIDS. This means that, to a certain extent, differentiation will continue to limit the generation of information and its comparability.

In particular, the way the ‘built-in flexibility’ of the Paris Agreement has recently been translated into the MPGs could lead to the generation of fragmented information by the transparency framework. Instead of defining objective criteria³ to differentiate between those developing country Parties that need flexibility in the light of their capacities and those that do not, Parties decided that it will be up to each developing country Party to ‘self-determine’ if it needs flexibility or not (UNFCCC, 2019a, Annex, paragraph 6). The MPGs for the ETF adopted in Katowice clearly specify the flexibilities that are available to developing country Parties that need it in the light of their capacities (see Table 4 for examples).

While the number of flexibilities in the MPGs is limited, and a Party needs to indicate its capacity constraints as well as a time-frame for improvement (UNFCCC, 2019a, Annex, paragraph 6), such self-determination by developing country Parties could lead to an unpredictable and problematic system in which some Parties could choose the most flexible requirements, resulting in data that is incomplete and incomparable with those of other countries or through time for a given Party. This risk is further reinforced by the fact that the technical expert review teams are barred from reviewing a Party’s determination to apply flexibility provided for in the MPGs and from reviewing whether a Party possesses the capacity to implement a specific provision without flexibility (UNFCCC, 2019a, Annex, paragraph 6).

Table 4. Examples of flexibility available to developing country Parties that need it in the light of their capacities.

MPGs	Applicable to each Party	Flexibility available to developing country Parties that need it in the light of their capacities
<i>National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases</i>		
Reporting guidance – Sectors and gases (UNFCCC, 2019a, Annex, Paragraph 48)	Each Party shall report seven gases: carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF ₆) and nitrogen trifluoride (NF ₃)	Flexibility to instead report at least three gases (CO ₂ , CH ₄ and N ₂ O) as well as any of the additional four gases (HFCs, PFCs, SF ₆ and NF ₃) that are included in the Party's NDC, are covered by an activity under voluntary cooperation (Article 6 of the Paris Agreement), or have been previously reported
Time series (UNFCCC, 2019a, Annex, Paragraph 57)	Each Party shall report a consistent annual time series starting from 1990	Flexibility to instead report data covering, at a minimum, the reference year/period for its NDC and, in addition, a consistent annual time series from at least 2020 onwards
<i>Mitigation policies and measures, actions and plans related to implementing and achieving an NDC</i>		
UNFCCC (2019a, Annex, Paragraph 85)	Each Party shall provide, to the extent possible, estimates of expected and achieved GHG emission reductions for its actions, policies and measures	Only encouragement to report such information
<i>Projections of greenhouse gas emissions and removals</i>		
UNFCCC (2019a, Annex, Paragraph 92)	Each Party shall report projections	Only encouragement to report such projections
UNFCCC (2019a, Annex, Paragraph 95)	Projections shall begin from the most recent year in the Party's national inventory report and extend at least 15 years beyond the next year ending in zero or five	Flexibility to instead extend their projections at least to the end point of their NDC

Source: Based on UNFCCC (2019a, Annex).

In addition, some of the flexibilities provided for in the MPGs could give developing countries the perverse incentive to submit NDCs that are intentionally limited in detail to avoid having to report in detail in the future. This could, for example, be the case regarding the GHGs that Parties are reporting on. Parties normally have to report on seven GHGs (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆) and nitrogen trifluoride (NF₃)) in their national inventory reports (UNFCCC, 2019a, Annex, paragraph 48). However, developing country Parties that need it in the light of their capacities have the flexibility to instead report only three GHGs (CO₂, CH₄ and N₂O) as well as any of the additional four gases (HFCs, PFCs, SF₆ and NF₃) that are included in the Party's NDC, are covered by an activity under voluntary cooperation (Article 6 of the Paris Agreement), or have been previously reported (UNFCCC, 2019a, Annex, paragraph 48). It is important to note that many developing countries – including relatively large emitters such as Saudi Arabia, Pakistan, Egypt, Bolivia and Venezuela – did not consider any gases other than CO₂ in their first NDC (see Pauw et al., 2016).

4.2. Scope

Over the years, the scope of transparency has expanded, to include the very diverse range of NDCs, as well as support and adaptation efforts. The reporting requirements of the ETF mean that developed and developing country Parties can certainly be expected to provide more complete, consistent and transparent information on their climate actions than in the past.

It is, however, very complicated for domestic or international constituencies to compare the ambition of different Parties' NDCs given that some Parties have put forward only qualitative NDCs or have made some or all of their commitments conditional on financial support (see e.g. Pauw et al., 2018; Roeser, Höhne, & Day, [this issue](#)).⁴ A key problem is that many countries pledged that their emissions in the future would be below 'business as usual' projections, but such projections are derived from different methods. As a consequence, even the efforts of countries using the same metric may not be easily contrasted (Aldy, Pizer, & Akimoto, 2017).

The variety of types of targets (see e.g. Pauw et al., 2016), methodologies and assumptions contained in NDCs will also complicate the assessment and comparison of progress made by Parties towards achieving their NDCs. This problem is further reinforced by the fact that, in the preparation of its BRT, each Party is to identify its own

qualitative and/or quantitative indicators for tracking its progress towards achieving its NDC. All these elements will make it difficult for non-state actors to meaningfully ‘name and shame’ or ‘name and fame’ some countries in direct contrast with others (see e.g. Kingston, 2019).

Particularly with regard to adaptation and support, the ETF will likely generate information that will be largely incomparable between Parties or even through time for a given Party. Even with the new MPGs, Parties will retain much discretion over several accounting and reporting dimensions of their climate efforts.

For example, the MPGs contain details on the information that Parties have to report about support provided and mobilized through public interventions (see UNFCCC, 2019a, Annex, paragraphs 118–129). While Parties are required to provide more information than before on several key aspects of their accounting methodologies, each contributing Party will still be able to decide what it counts as climate finance, and why its climate finance can be considered as ‘new and additional’. Parties will still be allowed to report their financial support provided as loans at face value; the grant-equivalent value of those loans is only to be reported on a voluntary basis. This means that a loan of \$50 million could still appear to be equal to a \$50 million grant in the figures reported by other contributing countries (see Weikmans & Roberts, 2019). In addition, reporting requirements for support received (UNFCCC, 2019a, Annex, paragraphs 130–145) are far less detailed than those for support provided and mobilized, which will make it difficult to assemble a global picture of whether and where climate finance promises are actually being met. The lack of clear guidance on climate finance transparency may reduce the climate finance-related incentives for more ambition.

When confronted with heterogeneous information, civil society actors and other observers have to devote significant resources to be able to make meaningful comparisons between the climate efforts of different Parties. In some cases – when Parties do not make available crucial details on the methodologies that they used to account for and report on their climate efforts – such comparisons will likely be very challenging or even impossible to make.⁵

4.3. Capacity

For developing countries, the challenge of ever more regular and comprehensive reporting can be discerned from the fact that, by the end of June 2019, only 46 (out of 156) developing countries had submitted their first BURs, which were due by the end of 2014 (while noting that 76 LDCs and/or SIDS are allowed to submit such reports at their discretion).⁶ Although reporting requirements for developing countries are less stringent than those for developed countries, this suggests that developing countries are struggling with aspects of reporting.

Many observers explain current reporting hurdles by pointing to capacity constraints in developing countries (e.g. Ellis & Moarif, 2015; Winkler, Mantlana, & Letete, 2017), and call for increased international support to build capacities to report. This rationale is apparent in the Paris Agreement’s reference to ‘built-in flexibility which takes into account Parties’ different capacities’ (Article 13.1), and the creation of the new Capacity Building Initiative for Transparency (UNFCCC, 2016, paragraph 94).⁷ Capacity constraints are real in some countries and the Capacity Building Initiative for Transparency could help overcome some of these constraints. However, the demand for support from the Capacity Building Initiative for Transparency is currently exceeding resource availability.⁸ It seems likely that capacity building for transparency will be a long-standing need and that capacity constraints will not be resolved anytime soon (Khan, Mfitumukiza, & Huq, *this issue*). For some countries, gaps in reporting may consequently persist for a long time.

The experience so far has also shown that technical reviews can place a significant burden on Parties, expert reviewers and the UNFCCC Secretariat, and that they require significant financial and human resources. By one estimate, the average amount of time required to carry out one Party’s review is 153 working days if it involves an in-country review, or 83 days if it involves a centralized review (Pulles, 2016). This has been problematic, as the number of technical experts available for carrying out reviews – particularly from developing countries – is still limited (Dagnet, Rocha, Fei, Elliott, & Krnjajic, 2017a). It will be challenging to ensure that sufficient capacity exists among the expert reviewer community as well as the UNFCCC Secretariat to carry out a much larger number of technical reviews than in the past. A lack of financial resources can easily compound already existing

challenges in securing sufficient capacity in this regard, and will likely lead to trade-offs that will limit the scope and depth of the review (see also Dagnet et al., 2017b). According to an estimate by the UNFCCC Secretariat, ‘starting in 2022, the number of experts needs to at least double to implement the transparency framework to around 1500 experts by 2024 to meet the requirements agreed under Katowice rulebook on transparency’ (UNFCCC, 2019d).

Finally, state-to-state multilateral review processes established under the Cancún Agreements have been hampered by limited participation by states. This probably reflects resource limitations: for smaller countries, it is not always possible to engage in detail with the lengthy reports and their reviews (Briner & Moarif, 2016). Some Parties will likely face similar challenges in the review processes of the ETF.

Capacity-related challenges may thus lead to the same problems with reporting that have plagued the existing transparency arrangements, hamper the effectiveness of expert reviews, and limit the effective participation by Parties in the facilitative, multilateral consideration of progress. This may mean that the ETF will not function as intended, which will in turn limit the extent to which the framework can help drive ambition upwards.

4.4. Politicization

By their very nature, the transparency arrangements established under the UNFCCC have always eschewed political judgment, making it harder to hold countries to account (Gupta & van Asselt, 2019). Overall, the ETF is similarly designed to avoid making any political judgment on the ambition of individual Parties in terms of climate action.⁹ In the lead-up to the Paris Climate Conference, some Parties pushed for the inclusion of an ex-ante review of NDCs that would help clarify whether pledges are sufficient (van Asselt, Sælen, & Pauw, 2015). However, the idea of such a review was integrated in the global stocktake, which is an ex-post review that focuses on collective rather than individual efforts (Gupta & van Asselt, 2019; Hermwille, Siemons, Förster, & Jeffery, 2019; Milkoreit & Haapala, 2019).

In addition, the ETF is designed to ‘be implemented in a facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty’ (Article 13.3). Given this provision, it seems unlikely that the ETF will ever lead to any formal ‘naming and shaming’ – for example via reports by UNFCCC bodies. This removes some of the reputational incentives through which ambition could be increased discussed earlier. In addition, non-state actors are hardly involved in formal review processes, largely due to fears of politicization (van Asselt, 2016).

The standards of evaluation of the technical expert reviews exemplify the apolitical dimension of the ETF. In the context of both the existing and the enhanced technical expert reviews, Parties are solely evaluated against procedural rather than substantive standards. These procedural standards – i.e. the TACCC criteria presented in section 3 – relate to the quality of the reporting of information that the transparency framework seeks to make visible. These standards used by the technical expert review teams are detached from the ambition of climate actions implemented by Parties. This means that a Party could perform extremely well against procedural standards (e.g. submit a timely report with all the necessary information on how it is doing), while at the same time refraining from implementing meaningful climate action. Technical expert review teams are barred from making political judgments and from reviewing the adequacy of a Party’s NDC, or of its domestic actions (UNFCCC, 2019a, Annex, paragraph 149). And while a technical expert review can confirm whether a Party has achieved its NDC – something a Party is to report itself – this does not lead to any further consequences, such as the engagement of the Article 15 Committee (Gu, Voigt, & Werksman, 2019). The standards of evaluation of the technical expert reviews will therefore likely limit the extent to which such reviews will generate useful information for non-state actors to play a role in pushing governments to strengthen the ambition of their NDCs.

The state-to-state multilateral review processes established under the Cancún Agreements (i.e. the multilateral assessment and the facilitative sharing of views) thus far involved many Party-to-Party questions, for instance related to individual Parties’ use of market-based mechanisms and the progress made in achieving climate pledges. The process has been said to contribute to policy exchange and learning, clarify technical issues in reporting and offer space for asking political questions (Briner & Moarif, 2016, p. 31; Deprez, Colombier, & Spencer, 2015, p. 12). However, evidence for such effects is more often than not anecdotal. Similarly, the Paris Agreement’s FMCP may generate information that could give some leverage to observers to encourage

governments to progressively strengthen the ambition of their promised efforts. However, it is uncertain whether many Parties will ask questions that concern the ambition of other Parties' NDCs and if the concerned Parties will answer such questions in a meaningful manner.

In addition, the apolitical nature of the ETF means that it will be difficult to deal with cases of political unwillingness to participate in it. As described above, timely and adequate reporting may be limited by capacity constraints. But it may also be limited by a lack of political willingness to report, both in developing and developed countries (Weikmans, 2017; Zahar, 2015). For example, it is apparent from technical review reports of the second BRs that the sections that were the most challenging for developed country Parties with regard to complying with the mandatory reporting requirements were those related to information on the provision of support to developing country Parties (Adams et al., 2015; UNFCCC Secretariat, 2017; Weikmans et al., 2016). It is doubtful that such cases of non-adherence to the mandatory reporting requirements were only due to capacity constraints.

Overall, the ETF does not address potential cases of political unwillingness to participate in it by, for example, identifying and promoting incentives to report or specifying any consequences of not reporting. Although a lack of reporting can be taken up by the Article 15 Committee, this Committee 'shall neither function as an enforcement or dispute settlement mechanism, nor impose penalties or sanctions' (UNFCCC, 2019c, Annex, paragraph 4). While a Party being brought before the Committee may result in some 'naming and shaming' of that Party, persistent non-compliance with reporting requirements will be hard to prevent entirely (Gu et al., 2019).

5. Conclusions

The ETF could help observers and other Parties to uncover new information on country-specific emissions trends and projections, on how Parties are living up to their promises to provide climate finance and other support, and on whether Parties are on track towards implementing and achieving their NDCs. Can such information help strengthen the ambition of NDCs? It depends. Information showing that a country is clearly off-track may help mobilize domestic or international constituencies to push a government to do more, but that government would likely be more concerned with achieving its short-term NDC rather than increasing the ambition of its subsequent NDC. However, showing that a country is on its way to over-achieve its NDC might help put pressure on its government to submit a new NDC that is less conservative. The same could happen if civil society organizations at the international or domestic levels identify a country as severely lacking ambition in comparison to other nations.

The various review processes of the ETF – or those linked to it – could help observers identify solutions and good practices already implemented by some Parties that could be replicated in other countries (see Dagnet et al., 2019). Moreover, the technical expert review and FMCP could help build mutual trust that Parties are on track towards achieving their NDCs. This could have a positive effect on the ambition of some Parties' NDCs.

However, assessing adequacy of action and policy requires comparable, intelligible, and complete information. As we have shown in this article, several challenges will likely pose barriers to the generation of such information by the ETF:

- *Differentiation-related challenges* are mainly linked to the potential use of the flexibilities offered to developing countries, as these flexibilities could limit the generation of information by the ETF and its comparability.
- *Scope-related challenges* refer to the difficulties associated with the assessment and comparison of progress made by Parties towards their NDCs. These difficulties are due to the variety of methodologies, assumptions and types of targets contained in NDCs, and to the diverse indicators that Parties will choose to track their progress. Moreover, the new MPGs leave much discretion over several accounting and reporting dimensions of climate action and support. To a certain extent, the ETF will therefore generate information that will be incomparable between Parties or even through time for a given Party.
- *Capacity-related challenges* could cause reporting hurdles for some Parties. The ETF could therefore generate information that may be outdated and non-comprehensive. In addition, a lack of human and financial resources could limit the scope and depth of technical reviews, thereby reducing the quantity and quality of information generated by the ETF. Moreover, limited capacity to participate in the FMCP may constrain its usefulness.

- *Politicization-related challenges* are linked to the apolitical dimension of the ETF. It notably means that the ETF will not lead to judgments, for example on the level of ambition of an NDC, or even on whether it has been achieved.

On the basis of incomplete and heterogenous information, significant resources will have to be devoted to allow for a comparison of the performance of Parties in terms of climate action and provision of support, and to assess progress made by some Parties towards achieving their NDCs. In some cases, such comparisons or assessments will be impossible to make. In addition, the ETF is likely to generate far more information than its predecessor. This may in turn lead to an ‘information overload’ for observers, who may end up overwhelmed by complex, incomparable, and sometimes irrelevant information (see Gupta & Mason, 2016).

This leads us to our final point. In this article, we have mainly examined the extent to which the ETF is likely to generate comparable, complete and timely information on the performance of Parties. However, the pathways for increasing ambition through transparency described in section 2 also depend on another crucial element: the effective use of such information. For these pathways to materialize, civil society organizations, opposition parliamentarians, national auditors, subnational authorities, researchers and other state and non-state actors will have to seize the information generated by the ETF and make use of it through public shaming (or faming), direct lobbying, legal action and other strategies. Future research could examine the factors that could facilitate or pose barriers to the effective use of the information generated by the ETF by this variety of actors. Transparency matters, but to have an impact on the success of the Paris Agreement, very much more is needed.

Notes

1. See <https://climateactiontracker.org/>.
2. See <http://civilsocietyreview.org/>.
3. Such criteria could have been based on existing classifications such as the criteria for the identification and graduation of LDCs (see UN-OHRLLS, 2019) or the World Bank’s criteria for classifying countries by income level per capita (World Bank, 2019).
4. The NDC Explorer (Pauw et al., 2016) counts 87 NDCs where the mitigation contribution is partly dependent on international finance forthcoming, and another 16 NDCs where this contribution is fully conditional on finance.
5. See <https://climateactiontracker.org/methodology/comparability-of-effort/>.
6. See <https://unfccc.int/node/17617/>.
7. Given that some developing countries need additional support to meet the Paris Agreement’s transparency requirements, Parties decided to establish the Capacity Building Initiative for Transparency (CBIT). Parties asked the Global Environment Facility (GEF) to make arrangements to support the establishment and operation of the CBIT (Khan, Roberts, Huq, & Hoffmeister, 2018). In June 2016, the GEF Council decided to prioritize project proposals based on demonstrated responsiveness to Paris Agreement transparency requirements, and for those countries that are most in need of capacity-building assistance, in particular SIDS and LDCs.
8. As of December 2018, cumulative pledges for the CBIT totalled about US\$63 million (GEF, 2019).
9. While the current and enhanced transparency frameworks do not shed light on this issue of ambition, Parties are nonetheless invited to specify why they think their respective NDCs are ambitious (see UNFCCC, 2016, paragraph 27).

Acknowledgements

The authors thank Anju Sharma and Paula Castro for their useful comments on an earlier version of this article. We also thank three anonymous reviewers for their thoughtful comments and suggestions for improvements. We are grateful to the Editor and Special Issue Guest Editors for their valuable guidance and support.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by the Fonds de la Recherche Scientifique – FNRS under grant number 32709873.

ORCID

Romain Weikmans  <http://orcid.org/0000-0002-1523-2993>

Harro van Asselt  <http://orcid.org/0000-0003-3028-0659>

J. Timmons Roberts  <http://orcid.org/0000-0002-8726-5698>

References

- Adams, K., Ciplet, D., Weikmans, R., Roberts, J. T., Chokshi, S., Gurwitt, S., ... Mitra, M. (2015). Ranking donor countries on their biennial reports. In AdaptationWatch (ed.), *Toward mutual accountability: The 2015 adaptation finance transparency gap report* (pp. 48–60). Amsterdam: AdaptationWatch. Retrieved from http://www.adaptationwatch.org/s/AW_Report_24-11-15-53nq.pdf
- Aldy, J. E., Pizer, W. A., & Akimoto, K. (2017). Comparing emissions mitigation efforts across countries. *Climate Policy*, 17(4), 501–515.
- Bodansky, D. (1993). The United Nations Framework Convention on Climate Change: A commentary. *Yale Journal of International Law*, 18(2), 451–558.
- Briner, G., & Moarif, S. (2016). *Enhancing transparency of climate change mitigation under the Paris Agreement: Lessons from experience*. Paris: OECD. Retrieved from <https://www.oecd.org/environment/cc/Enhancing-transparency-climate-change-mitigation-V2.pdf>
- Ciplet, D., Adams, K., Weikmans, R., & Roberts, J. T. (2018). The transformative capability of transparency in global environmental governance. *Global Environmental Politics*. doi:10.1162/glep_a_00472
- Ciplet, D., & Roberts, J. T. (2017). Climate change and the transition to neoliberal environmental governance. *Global Environmental Change*, 46, 148–156. doi:10.1016/j.gloenvcha.2017.09.003
- Dagnet, Y., Cogswell, N., Bird, N., Bouyé, M., & Rocha, M. (2019). *Building capacity for the Paris Agreement's enhanced transparency framework: What can we learn from countries' experiences and UNFCCC processes?* Washington, DC: WRI. Retrieved from https://www.transparency-partnership.net/system/files/document/WRI-building_capacity_PA-ETF.pdf
- Dagnet, Y., Rocha, M. T., Fei, T., Elliott, C., & Krnjajic, M. (2017a). *Mapping the linkages between transparency framework and other provisions of the Paris Agreement*. Washington, DC: WRI. Retrieved from <http://www.wri.org/sites/default/files/mapping-linkages-between-transparency-framework-other-provisions-paris-agreement.pdf>
- Dagnet, Y., van Asselt, H., Cavalheiro, G., Rocha, M. T., Bisiaux, A., & Cogswell, N. (2017b). *Designing the enhanced transparency framework, part 2: Review under the Paris Agreement*. Washington, DC: WRI. Retrieved from <http://www.wri.org/sites/default/files/designing-enhanced-transparency-framework-part-2-review-under-paris-agreement.pdf>
- Deprez, A., Colombier, M., & Spencer, T. (2015). *Transparency and the Paris Agreement: Driving ambitious action in the new climate regime*. Paris: IDDRI. Retrieved from <https://www.iddri.org/sites/default/files/import/publications/wp0315.pdf>
- Duyck, S. (2015). MRV in the 2015 Climate Agreement: Promoting compliance through transparency and the participation of NGOs. *Carbon & Climate Law Review*, 8(3), 175–187.
- Ellis, J., & Moarif, S. (2015). *Identifying and addressing gaps in the UNFCCC reporting framework*. Paris: OECD.
- Falkner, R. (2016). The Paris Agreement and the new logic of international climate politics. *International Affairs*, 92(5), 1107–1125.
- GEF. (2019). *Capacity building initiative for transparency (CBIT)*. Washington, DC: GEF. Retrieved from <http://www.thegef.org/topics/capacity-building-initiative-transparency-cbit>
- Gu, Z., Voigt, C., & Werksman, J. (2019). Facilitating implementation and promoting compliance with the Paris Agreement under Article 15: Conceptual challenges and pragmatic choices. *Climate Law*, 9(1), 65–100.
- Gupta, A., & Mason, M. (2016). Disclosing or obscuring? The politics of transparency in global climate governance. *Current Opinion in Environmental Sustainability*, 18, 82–90. doi:10.1016/j.cosust.2015.11.004
- Gupta, A., & van Asselt, H. (2019). Transparency in multilateral climate politics: Furthering (or distracting from) accountability?. *Regulation & Governance*, 13(1), 18–34. doi:10.1111/rego.12159
- Hermwille, L., Siemons, A., Förster, H., & Jeffery, L. (2019). Catalyzing mitigation ambition under the Paris Agreement: Elements for an effective global stocktake. *Climate Policy*. doi:10.1080/14693062.2019.1624494
- IPCC. (2006). *2006 IPCC guidelines for national greenhouse gas inventories*. Retrieved from <https://www.ipcc-nggip.iges.or.jp/public/2006gl/>
- Jacquet, J., & Jamieson, D. (2016). Soft but significant power in the Paris Agreement. *Nature Climate Change*, 6(7), 643–646. doi:10.1038/nclimate3006
- Johnstone, I. (2005). The power of interpretive communities. In M. Barnett & R. Duvall (Eds.), *Power in global governance* (pp. 185–204). Cambridge: Cambridge University Press.
- Karlsson-Vinkhuyzen, S. I., Groff, M., Tamás, P. A., Dahl, A. L., Harder, M., & Hassall, G. (2018). Entry into force and then? The Paris Agreement and state accountability. *Climate Policy*, 18(5), 593–599. doi:10.1080/14693062.2017.1331904
- Karlsson-Vinkhuyzen, S., & van Asselt, H. (2015). *Strengthening accountability under the 2015 climate change agreement*. Climate Strategies Policy Brief No. 2/2015. Retrieved from <https://climatestrategies.org/wp-content/uploads/2015/11/CS-PB2-Strengthening-Accountability-final2.pdf>
- Khan, M., Mfitumukiza, D., & Huq, S. (this issue). Capacity building for implementation of nationally determined contributions under the Paris Agreement.
- Khan, M., Roberts, J. T., Huq, S., & Hoffmeister, V. (2018). *The Paris framework for climate change capacity building*. London: Routledge.

- Khan, M., Robinson, S., Weikmans, R., Ciplet, D., & Roberts, J. T. (2019). Twenty-five years of adaptation finance through a climate justice lens. *Climatic Change*. doi:10.1007/s10584-019-02563-x
- Kingston, E. (2019, January). After Katowice: Three civil society strategies for ratcheting up climate ambition. *Ethics & International Affairs*. Retrieved from <https://www.ethicsandinternationalaffairs.org/2019/katowice-poland-climate/>
- Milkoreit, M., & Haapala, K. (2019). The global stocktake: Design lessons for a new review and ambition mechanism in the international climate regime. *International Environmental Agreements: Politics, Law and Economics*, 19(1), 89–106. doi:10.1007/s10784-018-9425-x
- Moehner, A., & Goldberg, M. (this issue). Climate change adaptation in the NDCs.
- Morgan, J., Ballesteros, A., McGray, H., Levin, K., Daviet, F., Stolle, F., & McMahon, H. (2010). Reflections on the Cancun Agreements. Retrieved from <http://www.wri.org/blog/2010/12/reflections-cancunagreements>
- Pauw, W. P., Cassanmagnano, D., Mbeva, K., Hein, J., Guarin, A., Brandi, C., ... Muhammad, D. (2016). *NDC explorer*. German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), African Centre for Technology Studies (ACTS), Stockholm Environment Institute (SEI). Retrieved from http://doi.org/10.23661/ndc_explorer_2017_2.0
- Pauw, W. P., Castro, P., Pickering, J., & Bhasin, S. (this issue). Conditional nationally determined contributions: Foothold for equity in the Paris Agreement or Achilles heel?
- Pauw, W. P., Klein, R. J. T., Mbeva, K., Dzebo, A., Cassanmagnano, D., & Rudloff, A. (2018). Beyond headline mitigation numbers: We need more transparent and comparable NDCs to achieve the Paris Agreement on climate change. *Climatic Change*, 147(1-2), 23–29. doi:10.1007/s10584-017-2122-x
- Pulles, T. (2016). Did the UNFCCC review process improve the national GHG inventory submissions? Retrieved from <http://ghginstitute.org/2016/10/28/did-the-unfccc-review-process-improve-the-national-ghg-inventory-submissions/>
- Roberts, J. T., & Weikmans, R. (2017). Postface: Fragmentation, failing trust and enduring tensions over what counts as climate finance. *International Environmental Agreements: Politics, Law and Economics*, 17(1), 129–137. doi:10.1007/s10784-016-9347-4
- Roeser, F., Höhne, F., & Day, T. (this issue). Making climate action more transparent and ambitious: lessons learned from the first Nationally Determined Contributions (NDCs).
- UNFCCC. (1992). *United Nations Framework Convention on Climate Change*. Retrieved from <https://unfccc.int/resource/docs/convkp/conveng.pdf>
- UNFCCC. (2006). *Decision 15/CMP.1, Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol* (Document FCCC/KP/CMP/2005/8/Add.2, 30 March 2006). Retrieved from <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=54>
- UNFCCC. (2011). *Decision 1/CP.16, The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention* (Document FCCC/CP/2010/7/Add.1, 15 March 2011). Retrieved from <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>
- UNFCCC. (2012). *Decision 2/CP.17, Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention* (Document FCCC/CP/2011/9/Add.1, 15 March 2012). Retrieved from <https://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf>
- UNFCCC. (2014). *Decision 24/CP.19, Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention* (Document FCCC/CP/2013/10/Add.3, 31 January 2014). Retrieved from <https://unfccc.int/resource/docs/2013/cop19/eng/10a03.pdf>
- UNFCCC. (2016). *Decision 1/CP.21, Adoption of the Paris Agreement* (Document FCCC/CP/2015/10/Add.1, 29 January 2016). Retrieved from <https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf>
- UNFCCC. (2019a). *Decision 18/CMA.1, Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement* (Document FCCC/PA/CMA/2018/3/Add.2, 19 March 2019). Retrieved from https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf
- UNFCCC. (2019b). *Decision 19/CMA.1, Matters relating to Article 14 of the Paris Agreement and paragraphs 99–101 of decision 1/CP.21* (Document FCCC/PA/CMA/2018/3/Add.2, 19 March 2019). Retrieved from https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf
- UNFCCC. (2019c). *Decision 20/CMA.1, Modalities and procedures for the effective operation of the committee to facilitate implementation and promote compliance referred to in Article 15, paragraph 2, of the Paris Agreement* (Document FCCC/PA/CMA/2018/3/Add.2, 19 March 2019). Retrieved from https://unfccc.int/sites/default/files/resource/cma2018_3_add2_new_advance.pdf
- UNFCCC. (2019d). *Wanted: Expert reviewers to enable transparency of climate action*. <https://unfccc.int/news/wanted-expert-reviewers-to-enable-transparency-of-climate-action>
- UNFCCC Secretariat. (2017). *Review practice guidance. 2017 Update of the analysis of the assessment of completeness and transparency of information reported in biennial reports. Background paper for the 4th Lead Reviewers Meeting, 6-7 March 2017, Bonn, Germany*. Retrieved from https://unfccc.int/sites/default/files/backgroundpaperanalysismostlypartially_published.pdf
- UN-OHRLS. (2019). *Criteria for identification and graduation of LDCs*. New York: United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States. Retrieved from <http://unohrls.org/about-ldcs/criteria-for-ldcs/>
- 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. doi:10.1163/18786561-00601006
- van Asselt, H., Sælen, H., & Pauw, P. (2015). *Assessment and review under a 2015 climate change agreement*. Copenhagen: Nordic Council of Ministers. Retrieved from <http://norden.diva-portal.org/smash/get/diva2:797336/fulltext01.pdf>

- Weikmans, R. (2017). Transparency from the other side: A review of the first biennial update reports. In K. Adams & D. Falzon (Eds.), *Toward implementation: The 2017 AdaptationWatch report* (pp. 50–56). Amsterdam: AdaptationWatch.
- Weikmans, R., Adams, K., August, H., Culver, T., Jones, C., Salem, K., ... Roberts, J. T. (2016). Assessing developed countries' transparency: A review of 2016 biennial reports, AdaptationWatch (2016). *Toward Transparency: The 2016 adaptation finance transparency gap report* (pp. 43–57). AdaptationWatch: Amsterdam. Retrieved from <http://www.adaptationwatch.org/s/Adaptation-Watch-Report-2016-Digital-FIN.pdf>
- Weikmans, R., & Roberts, J. T. (2019). The international climate finance accounting muddle: Is there hope on the horizon? *Climate and Development*, 11(2), 97–111. doi:10.1080/17565529.2017.1410087
- Winkler, H., Mantlana, B., & Letete, T. (2017). Transparency of action and support in the Paris Agreement. *Climate Policy*, 17(7), 853–872. doi:10.1080/14693062.2017.1302918
- World Bank. (2019). *World Bank country and lending groups*. Washington, DC: World Bank. Retrieved from <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- Zahar, A. (2015). *International climate change law and state compliance*. London: Routledge.