

Sectoral implementation of nationally determined contributions (NDCs)

May 2017

TRANSPARENCY

This publication forms part of a series of NDC sectoral overviews, which provide information about current sectoral contributions to global greenhouse gas emissions and prospects for implementing NDCs in these sectors.

Each briefing paper presents concrete options for integrating sectoral measures in future NDCs, as well as more general cross-sectoral recommendations for moving forward with emissions-reductions measures.

Written primarily from the perspective of climate change experts, with input and suggestions from sector colleagues, the briefing series' intended target audience is twofold: first sectoral experts, who are facing the challenge of implementing the NDCs and related climate policies in their respective sectors; and second climate change experts, highlighting the relevance of the sector for NDC implementation.

This briefing paper discusses transparency and measurement, reporting and verification (MRV) in the NDC context. MRV serves to enhance the transparency of climate change actions, as well as clarify information about support that has been provided and received. MRV in this case refers to all measures that countries take to collect data on greenhouse gas emissions, mitigation actions and support, their efforts to compile this information in reports and inventories, and to subject these to review or analysis.

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Transparency and climate change

Transparency pre-Paris Agreement

Transparency has traditionally been a key building block for the international climate regime. The MRV arrangements pre-Paris, established through a series of decisions by the COP since 2007 has several objectives: to improve the understanding of mitigation actions, support provided and received; to track progress of Parties' commitments under the UNFCCC; to increase trust and confidence among countries that they will fulfill their commitments; to increase the efficient and effective use of climate finance; and to help to improve policy planning and prioritisation of policies at the national level (UNFCCC 2010). To achieve these objectives, Parties under the Convention are subject to a series of reporting obligations, which are detailed in Table 1. The results of implementing these MRV arrangements pre-Paris are largely mixed. While the quality and breadth of GHG reporting by Annex I Parties and a number of Non-Annex I countries has significantly improved over time, many developing countries have yet to submit their first Biennial Update Report (BUR) (Briner & Moarif 2016). For example, only one-third of non-Annex I countries that are not Small Island Developing States (SIDS) or Least Developed Countries (LDCs) have submitted a BUR (GEF 2016c).

Transparency in the Paris Agreement

The *enhanced transparency framework* (ETF), a key outcome of COP21 in December 2015, largely builds on the existing arrangements on MRV. The enhanced framework includes transparency of action and support, and applies to all Parties. It aims at providing a clear understanding of mitigation actions, including progress towards NDC implementation and adaptation (Article 13.5), as well as clarity on support provided and received (Article 13.6 PA). Most importantly, the ETF will inform global stock-taking efforts, with the first one to take place in 2023 and which will depend on clear, transparent and understandable information (see also the overview briefing paper of this briefing series).

In line with other provisions in the Paris Agreement, the ETF overcomes the differentiation between Annex I and non-Annex I Parties (see Table 1). As a consequence, the new transparency framework applies to all Parties; while developing countries will be allowed some flexibility regarding the scope, frequency, level of detail of reporting and the review process, depending on their capacities, and they will receive support from developed countries to fulfil their obligations. It is not, however, specified how such capacities are to be determined (Cavalheiro 2016). Flexibility should recognise different capacities, but should not

ceмент capacity differences. Recognition of flexibilities should be seen as a pragmatic way to improve capacities so that all Parties get to the same level over time.

Under the ETF, all Parties will have mandatory reporting obligations on GHG emissions (national inventory report) and will need to report on their efforts to implement the NDCs using common reporting guidelines and accounting rules (see Table 1). Unlike the MRV arrangements pre-Paris, reports from all Parties will be subject to technical expert reviews (UNFCCC 2015). In addition, given the importance of support, in particular climate finance, to implement the Paris Agreement and the NDCs, the mandatory reporting requirements for climate finance have also been expanded. All developed countries must report on climate finance provided and, for the first time, also on climate finance mobilised. Developing countries, who provide support, are encouraged to report on those items. Further, developing countries should report on support needed and received.

The ETF is expected to eventually replace some of the arrangements of the existing MRV framework, such as biennial reports and BURs. National Communications, however, are set to continue under the ETF and more details are to be elaborated by 2018. A transition period may be required before the ETF becomes fully operational.



The development of open-data and knowledge-sharing platforms allows countries to look for guidance on how to set up necessary transparency processes.

TABLE 1: Arrangements on transparency pre-Paris and post-Paris, adapted from Briner & Moarif (2016), Ellis & Moarif (2016), UNFCCC (2010) and (UNFCCC 2015)

	EXISTING MRV ARRANGEMENTS (PRE-PARIS)			ENHANCED TRANSPARENCY FRAMEWORK (PARIS AGREEMENT)		
	Applicability	Frequency of reporting	Review/ verification	Applicability	Frequency of reporting	Review/ verification
<p>Annual GHG Inventory</p> <p>Annual GHG inventory covering emissions and removals of direct GHGs</p>	Annex I Parties	Annual	In-depth, technical review in the form of yearly centralised reviews and additional, more stringent in-country reviews every 5 years	All Parties	Annual (more flexibility for LDCs and SIDS)	Technical expert review, with support for developing countries
<p>National Communications (NCs)</p> <p>Report on actions taken to implement the Convention</p>	All Parties	Every 4 years	In-depth review including country visits (Annex I), None for non-Annex I	All Parties	Continue every 4 years (no specific provisions in the Paris Agreement)	TBD
<p>Biennial Reports (BRs)</p> <p>Report on progress in achieving emission reductions and the provision of financial, technology and capacity-building support to non-Annex I Parties (can also be presented as annex to NCs)</p>	Annex I Parties	Biennial	International Assessment and Review (IAR) incl. technical review and multilateral assessment	All Parties	Biennial (more flexibility in scope, frequency and detail of reporting for LDCs and SIDS)	Technical expert review (with support for developing countries) and facilitative, multilateral consideration of progress for support provided as well as NDC implementation.
<p>Biennial Update Reports (BUR)</p> <p>Updates of national (GHG) inventories, measurement of mitigation actions and their effects, reporting on domestic MRV system, needs and support received</p>	Non-Annex I Parties	Biennially (Consistent with Party's capabilities)	International Consultation and Analysis (ICA): Technical analysis and facilitative sharing of views	<p>Reports</p> <p>Information on progress made in implementing and achieving the NDC; information on climate change impacts and adaptation; financial, technology, transfer and capacity building support provided, needed and received.</p>		

Whilst the Paris Agreement introduced the ETF, its exact modalities, procedures and guidelines (MPGs) are not yet fleshed out and are currently being developed under the UNFCCC, with the aim to adopt them by COP24 in 2018. The MPGs will include flexibility for developing countries, specific scope and timing of the national GHG inventories, progress reports, technical expert review and multilateral consideration of progress (Briner & Moarif 2016). As an immediate first step, the Global Environment Facility (GEF), tasked by the COP in 2015, operationalised the *Capacity Building Initiative for Transparency* at COP22. This initiative's objective is to support developing countries in building capacity for the new monitoring and reporting requirements and to assist in the improvement of transparency over time (GEF 2016b).

The MRV arrangements pre-Paris are centred primarily on climate change mitigation. Enhancing transparency on adaptation plans and support needs is more difficult for a variety of reasons, including the absence of common indicators and the voluntary nature of reporting on adaptation through national communications. Nonetheless, the ETF will require Parties to also monitor and report information on adaptation.

Transparency in the broader context of NDC development, implementation and revision

Transparency of NDCs can be understood as the completeness and clarity with which their content is presented (Damassa et al. 2015). The variability of NDC formats (including, for example, different scopes of emission targets or types of mitigation targets) poses a significant challenge for comparability and accounting, as well as for the development of guidance on transparency and standardized approaches. Indeed, the way in which NDC goals are presented has repercussions on the information and transparency requirements needed to compare and assess them, and track progress towards their implementation. For example, for economy-wide absolute emission reduction goals, the information needed to understand and track progress includes, among other things: GHG inventory, timeframe, base year, target year, and global warming potentials (GWPs) used. For an economy-wide intensity target, the country would also need to provide information on GDP/population projections. In addition, more clarity will be needed on the reporting and accounting of conditional and unconditional targets.¹

¹ For a more detailed outline of transparency requirements for various types of NDCs see: <http://www.oecd.org/environment/cc/Unpacking-transparency-provisions-Paris-Agreement-CCXG-May2016.pdf> or https://mitigationpartnership.net/sites/default/files/indc-conditionality_0.pdf

Enhanced transparency serves the purpose of improving NDC development, revision and tracking, as it will help the international community to gain the top-down perspective that it needs to determine if global climate change efforts are on track. The improved transparency will also help national governments in their bottom-up planning processes at the sectoral level. Work remains to be done to ensure that top-down efforts at generating data for GHG inventories lines up with the project-level work that often generates the data. Currently, these two top-down and bottom-up processes are not lining up. Greater transparency can help resolve this misalignment of efforts.

At the international level, transparency will be crucial to facilitate the global stocktake and assess collective progress towards achieving the long-term goals of the Paris Agreement. In effect, the Paris Agreement builds on an increasing aggregate and individual progression of climate mitigation and adaptation efforts over time. Transparency provisions may enable better communication and understanding of ambition and ambition-raising potential over time across NDC cycles. In addition, at the international level, transparency also helps to foster credibility and increase buy-in from all kinds of stakeholders.

At the national, cross-sectoral level, transparency is crucial for the centralisation of information and holistic cross-sectoral planning for the development and tracking of NDCs and also to provide a convincing evidence-base, which will be important for the domestic, political ambition-raising process.



Transparency systems can provide the basis for strengthening and adjusting existing policies, as well as for identifying gaps and defining areas for support.

At the sectoral-level, transparency is needed for tracking progress towards sectoral targets, as well as progress towards implementing strategies and plans set forth in

Key steps for moving towards sector-driven implementation and ambition raising

Many of the key steps for moving ahead with NDC implementation and ambition raising are relevant for all sectors. They are summarised in this box. Further details on the individual steps can be found in the overview briefing paper of this briefing series.

Establishment of institutional bodies for oversight of implementation and monitoring of progress: Alignment of institutions based on optimisation of existing mandates, to include broader levels of governance in strategy making including finance and planning ministries, and devolvement of responsibilities to line ministries and agencies with most sector influence. Approaches developed should be resilient to government staff turnover.

Development and dissemination of knowledge on climate requirements and benefits: Enhancing understanding on the implications of the Paris Agreement for the sector, and the social and economic benefits of climate change mitigation and adaptation measures.

Plans for achievement of sector targets, and review of potential for increasing ambition in specific sub-sectors: Stock-take and integration of sub-national, national and non-state action, translation to subsector targets, determination of long-term full decarbonisation targets for the sector, and collation of this information into a target-based roadmap. Potential for ambition raising can be analysed based on regional best practice policies and consideration of targets for sub-sectors not covered in climate strategy.

Planning and implementation of instruments to leverage investments: Evaluation of investment requirements and the role of private and public finance for leveraging those investments. Analysis of persisting barriers and development of concepts for projects/programmes that can address those barriers through unilateral action or international support (e.g. NAMAs).

Revision of NDC: Update content of NDC for greater transparency, clarity and in line with aligned national strategy and identified ambition raising potential.

Introduction of policy packages and programmes to kick-start action: Introduction of new policies and strengthening of existing policies, in accordance with sector planning process, and development and submission of proposals for internationally supported programmes (e.g. NAMAs).

the NDCs. The results can be fed into processes for strengthening and adjusting existing policies, as well as for identifying gaps and defining areas for support. Furthermore, transparency can also help to identify further domestic emission reduction potentials and to help decision-makers set targets in line with those potentials, thereby enabling a prioritisation of activities and an identification of quick wins. As transparency of information improves, the NDC planning and implementation stages become easier and NDC implementation gets a boost. The enhanced transparency also enables effective accounting.

Nevertheless, there are several barriers for improving transparency, including a fragmentation of information flows, lack of legal underpinnings, lack of common key performance and decarbonisation indicators, a general perceived sensitivity about the sharing of data and related data privacy concerns, lack of human and financial resources and processes to gather information or outdated data collection mechanisms (e.g. Wenzel 2016). In addition, the lack of clear institutional responsibilities and arrangements on roles and processes at the national (and sectoral) level, in particular with regard to the collection of data, can be a

huge challenge especially in developing countries. Indeed, without sound arrangements, it is unlikely that data flows and cooperation with other relevant stakeholders in the public and private sectors will improve.

Moving ahead with implementation and raising ambition

When considering options on how to move ahead on finalising and operationalising the enhanced transparency framework and further strengthening transparency, recommended actions can be taken at the international, national and sectoral levels:

At the **international level** (outward communication perspective/ top-down level):

- » *To further enhance transparency at the international level and support countries with the implementation of their NDCs, it will be helpful to further develop supplementary guidance on transparency by sector, building on existing IPCC guidelines.* These should provide sector-specific



A national coordination body involving a variety of relevant stakeholders can help oversee the development, operation and enforcement of MRV frameworks.

guidance not only for calculating GHG inventories but importantly also for reporting on support, and including adaptation, and could be developed as part of the MPGs. For example, ahead of COP21 and during the INDC preparation phase, the Lima Call for Climate Action provided voluntary transparency guidelines, which were used by several countries in conjunction with guidance provided by international organizations to formulate their INDCs.

- » Similarly, *common accounting and reporting metrics, procedures and methodologies could be determined for the communication of targets for each sector* — regardless of the type of NDC — allowing flexibility for nationally appropriate contexts. Standardised decarbonisation indicators and other key performance indicators for sub-sectors could also be identified and are helpful to allow for comparability, as well as for tracking progress.
- » *Building on existing arrangements, further develop open-data and knowledge-sharing platforms*, which countries could turn to when looking for guidance and examples on how to set up the necessary processes and institutional arrangements, such as currently being developed by the CBIT Global Coordination Platform (GEF 2016a).
- » Building on the experience with the pre-Paris MRV arrangements, *agreeing on regular cycles for the technical review for both developed and devel-*

oping countries under the UNFCCC might be advantageous especially for the quality of reporting. In terms of the recommendations of the review, flexibility would need to be allowed for developing countries.

- » Given the importance of transparency for the facilitative multilateral consideration of progress in NDC implementation among Parties, *inviting non-state actors² to provide (additional) information could be helpful to fill information gaps and increase transparency. Non-state actors, including civil society, can also be critical in ensuring and driving the effectiveness of the enhanced transparency framework.* Therefore, it might be beneficial to officially recognise and strengthen their role in the discussion on MPGs of the enhanced transparency framework.
- » As reporting requirements have been expanded and are still being elaborated, no country has experience with the new reporting requirements laid out in the Paris agreement. While the MPGs are still being developed, *reporting, including of first BURs, could therefore be further encouraged to build capacity early on for the new requirements* (Ellis & Moarif 2016). Similarly, *strengthening current MRV requirements (BUR/ GHG inventory preparations) is key to prepare for the enhanced requirements under the Paris Agreement.* The better a country

² All actors that are not strictly government, this can include international organisations, companies and NGOs for example.

already fulfills the current requirements, the smoother the transition will be to the new requirements. An example of how to successfully adapt to new reporting / transparency requirements can be found by looking at how Annex I countries, who have gained considerable reporting experience, were able to transition from the IPCC 1996 to the IPCC 2006 GHG inventory guidelines.

- » *Climate finance is crucial for the implementation of the Paris Agreement and the NDCs.* It will, therefore, be important to better understand support needs (including for capacity building and technology) and climate finance flows. Developing countries could be encouraged to submit information on (private) finance received. As capacity will need to be built, non-Parties could also be invited to provide information (Ellis & Moarif 2016).

At the **national level** (inward information/ bottom-up perspective):

- » *Given the importance of institutional arrangements, it is key to have a national coordination body in place to oversee the development, operation and enforcement of monitoring, reporting and verification frameworks.* This body should involve a variety of relevant stakeholders (e.g. ministries, business representatives, scientific experts, other) including stakeholders with access to and an understanding of existing information systems.
- » *Similarly, it is critical to harmonise and better integrate existing data collection structures.* Usually, a wealth of relevant information is already collected by various entities and at several levels. However, often there are no structures or processes in place to share information.

At the **sectoral level** (inward information/ bottom-up perspective):

- » *The identification of adequate and common parameters and methodologies is important to consistently assess resource needs at the sectoral level (finance, technical assistance, technology).* This is particularly important to enable a permanent, sustainable monitoring system. This may also enhance the integration of internal processes (sub-

national and national integration), and the integration between internal processes and international communication. Supplementary guidelines such as currently being produced under the Initiative for Climate Action Transparency (ICAT) can provide help on the setting, reporting and implementation of sector specific targets.

- » *Sector-level information is crucial to inform on the implementation progress and future revisions of NDCs, as well as specific support needs.* As such, it should be used as inputs for national reporting (BURs/ BRs and future reports, NCs, etc.) submitted to the UNFCCC.
- » *It would be helpful to streamline sectoral reporting requirements into climate finance instruments, as well as create and/ or make better use of market incentives for private sector participation in the collection of information and organisation of information flows.*

FURTHER READING

Further details on the topics discussed in this briefing paper may be found in the following sources, amongst others:

Consequences from the enhanced transparency framework for Parties of the Convention

- OECD, 2016 → [Transparency in the Paris Agreement: Unpacking provisions on mitigation and support.](#)
- UNEP, 2016 → [Understanding the Paris agreement: analysing the reporting requirements under the enhanced transparency framework.](#)

Further insights on the main differences between the current transparency framework and the enhanced transparency framework

- OECD, 2016 → [Enhancing transparency of climate change mitigation under the Paris Agreement: Lessons from experience.](#)

Future modalities, provisions and guidelines of the enhanced transparency

- OECD, 2016 → [Possible structure of mitigation related modalities, procedures and guidelines for the enhanced transparency framework.](#)

Strengthening transparency of climate finance under the Paris Agreement

- OECD, 2016 → [Enhancing transparency of climate change mitigation under the Paris Agreement: Lessons from experience.](#)

Transparency and adaptation

- OECD, 2016 → [Communicating Progress in National and Global Adaptation to Climate Change.](#)

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About the GIZ Climate Policy Support Programme

GIZ Climate Policy Support Programme aims at developing and mainstreaming innovative approaches to tackle the challenges of climate change in the context of German Development Cooperation. On behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), it supports developing countries in their efforts to mitigate climate change and to adapt efficiently to its impacts. Through conceptual and practical activities, the Climate Policy Support Programme actively contributes to the implementation of the Paris Agreement and the UN Sustainable Development Goals.

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