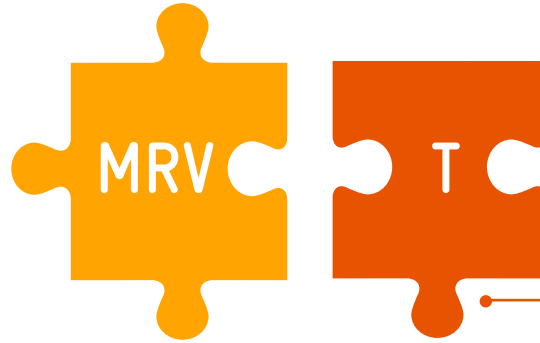


Monitoring, Reporting and Verification



Transparency

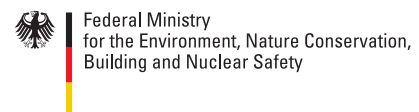


Accounting

Deciphering MRV, accounting and transparency for the post-Paris era

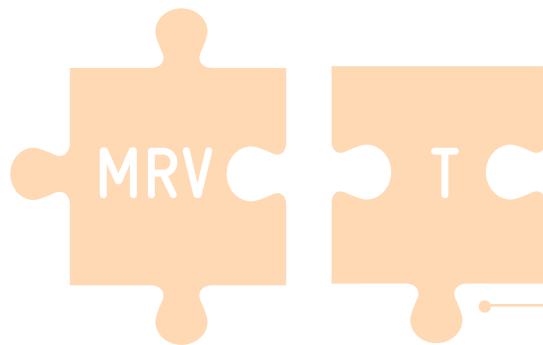


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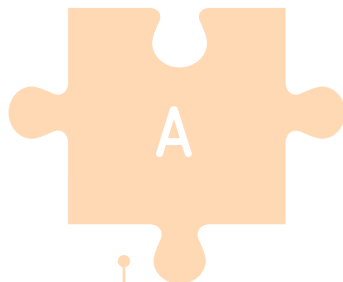


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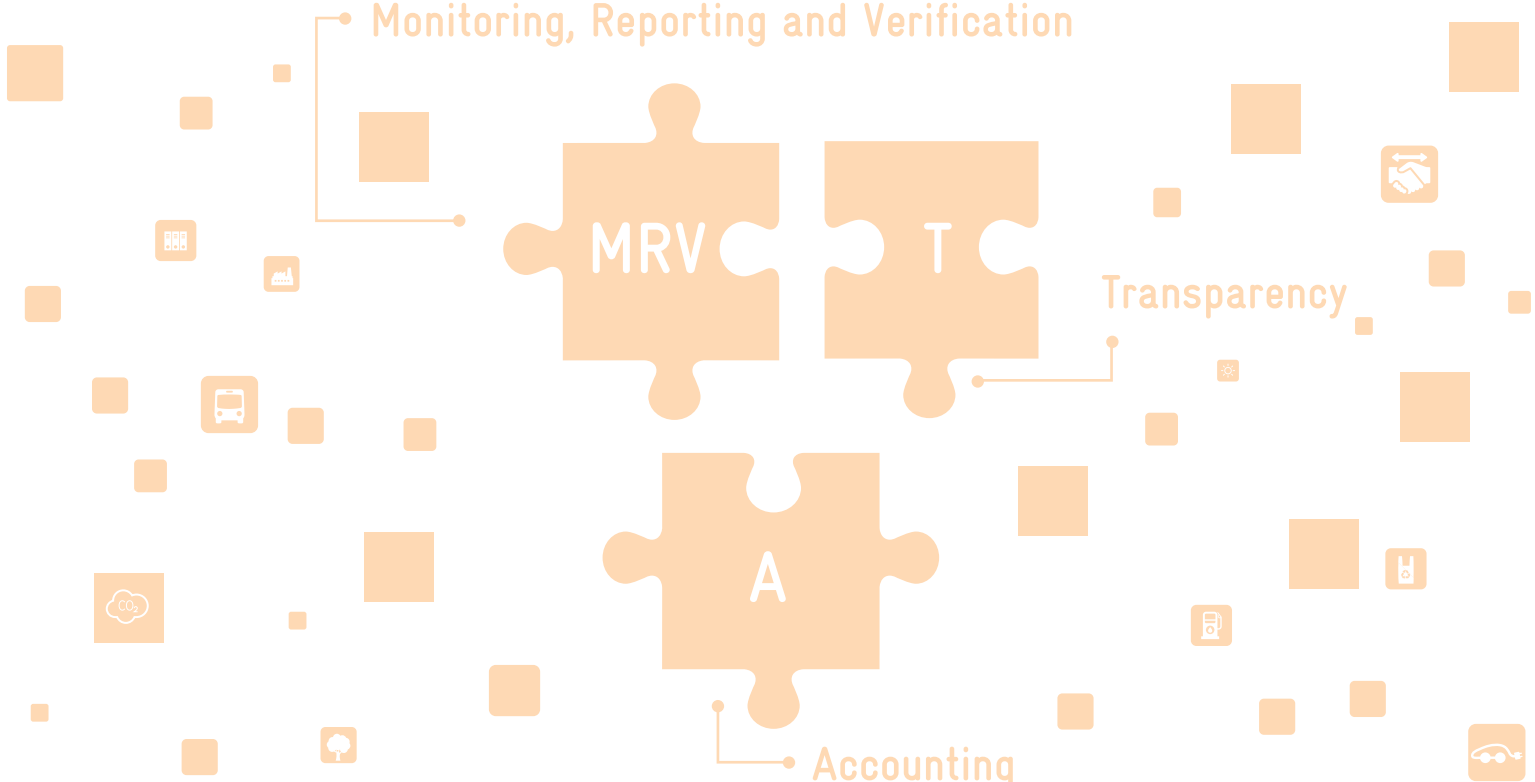
Monitoring, Reporting and Verification



Transparency



Accounting



Deciphering MRV, accounting and transparency for the post-Paris era

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Foreword: Tracking and reporting NDC achievement

According to the United Nations, ‘the Paris Agreement [...] – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so’. As such, it charts a new course in the effort against climate change. The implementation of this unprecedented global agreement rests on five critical pillars: the (2°C) temperature goal, each Party’s national contributions to climate change action (in the form of the NDC), the accounting for those contributions, climate finance and support, and adaptation to climate change.

In terms of accounting, the negotiations are still in progress. An ad hoc working group was set up under the Paris Agreement to present, by 2018 at the latest, recommendations on accounting guidance. From 2020 onwards, these recommendations will become applicable for the NDCs. The ‘Accounting Rules for the Achievement of the Mitigation Goals of Non-Annex 1 Countries’ project, financed by the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), is supporting this process by piloting accounting system arrangements in and with its partner countries. The project aims to contribute to the design of a functional structure for the tracking of the achievement of mitigation targets that should meet not only the requirements of the Paris Agreement, but also domestic needs. The project will therefore produce a series of publications exploring relevant issues.

The three concepts addressed in this paper – **measurement, reporting and verification (MRV)**, **accounting** and **transparency** – are closely linked, and sometimes mixed up, although their interexchangeability is limited. Applying a clear and distinctive language will help the definition of system structures at the international and domestic level for data on emission reductions that are due as a reaction to the requirements resulting from the Paris Agreement in terms of transparency and accounting, but also in terms of informing NDC implementation and design at the domestic level.

We are delighted to present this publication which explores the linkages and interactions between accounting, transparency and MRV, assesses these concepts’ evolution over time, and concludes by examining the status of activities under the Paris Agreement and what has been achieved so far.

1. Introduction

Under the Paris Agreement, all Parties to the United Nations Framework Convention on Climate Change (UNFCCC) – developed and developing countries alike – agreed on the most ambitious goal to date to limit the increase of greenhouse (GHG) emissions and avoid dangerous climate change. The Paris Agreement aims to ‘hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change’ (*Article 2*), and to ‘achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century’ (*Article 4, UNFCCC 2015*).

The **Paris Agreement** has the objective of holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change as set out in Article 2 and to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century as set out in Article 4 (UNFCCC, 2015a, sec. Art. 4).

NDCs represent the efforts of the countries to, among others, mitigate national GHG emissions. The majority of the Parties included a quantitative mitigation target in their first-ever intended NDC. Other types of contributions relate to adaptation, mitigation actions, co-benefits (e.g. reducing black carbon emissions) or climate finance.

Different to the Kyoto Protocol, the Paris Agreement sets no common quantitative mitigation goal for its Parties. Instead, Parties have put forward nationally determined contributions (NDC) that represent their efforts to, among other things, mitigate national GHG emissions. The majority of the Parties have set a quantitative mitigation target in their intended nationally determined contributions (iNDCs), which become the Parties’ initial NDCs post ratification of the Paris Agreement. Other types of contribution include adaptation, co-benefits (e.g. reducing black carbon emissions), or other forms of action that contribute to mitigation. Many NDCs from developing countries include contributions that are conditional upon the receipt of international support (i.e.

climate finance, technology transfer or capacity building). When the GHG reductions implied by all the NDCs' mitigation targets submitted to date are totalled, they are insufficient to meet the 2°C temperature goal (*Paragraph 17, UNFCCC 2015*). Increasing the ambition of mitigation contributions is therefore of the utmost importance.

When Parties track the progress of their national mitigation efforts, they are better equipped to achieve the mitigation contribution set out in their NDC. If this information is shared at the UNFCCC level, this will allow other Parties to understand the progress made under the Paris Agreement both by individual Parties and collectively. For this reason, the Paris Agreement provided for the establishment of an **Enhanced Transparency Framework (ETF)** that includes reporting requirements for both developed and developing countries (*Article 13, Annex, UNFCCC 2015*).

The three pillars of the Paris Agreement

Where Parties track relevant information on national mitigation efforts, this supports them in steering towards achieving the mitigation contribution included in their NDC. Where such information is shared at the UNFCCC level, this will allow other Parties to understand progress under the PA, including collective progress. For this reason, the PA established an **enhanced transparency framework (ETF)** which includes reporting requirements for both developed and developing countries (UNFCCC, 2015, sec. Annex, Art. 13). At present, certain reporting requirements for developing countries towards the UNFCCC already exist under the so-called **MRV (measurement, reporting and verification) framework** (UNFCCC, 2011, 2012).

Furthermore, a global stocktake is intended to be regularly carried out by the UNFCCC Secretariat to understand overall progress in the implementation of the PA (UNFCCC, 2015, sec. Annex, Art. 14). A first exercise of a global stocktake in the form of a facilitative dialogue will take place in 2018.

The Article 4.13 of the PA also requires Parties to **account** for the emissions and removals of their NDCs (UNFCCC, 2015, sec. Annex, Art. 4.13). How this should be done in practice and what information Parties should be used, remains to be defined and set out in guidelines or orientations.

At present, the UNFCCC's measurement, reporting and verification (**MRV**) framework lays down a number of reporting requirements for developing countries (*UNFCCC 2011, UNFCCC 2012*). Furthermore, the UNFCCC Secretariat is required to regularly undertake a global stocktake to understand the overall progress made on implementing

the Paris Agreement (*Article 14, Annex, UNFCCC 2015*). In 2018 the first global stocktake exercise will take place in the form of a facilitated dialogue.

Article 4.13 of the Paris Agreement (*Annex, UNFCCC 2015*) also requires its Parties to **account** for the GHG emissions and removals put forward in their NDCs. It is still not clear how this is to be carried out in practice and what information Parties should use for this accounting. Once these factors are determined, they will need to be communicated to Parties in the form of guidelines or orientations.

The concepts of **MRV**, **accounting** and **transparency** existed well before the Paris Agreement. However, during the course of the various negotiation rounds each of these concepts has gradually evolved and has assumed distinct functions. In negotiations, it is often the case that agreement is reached by defining concepts loosely, leaving plenty of room for interpretation. This is also true of the Paris Agreement where a number of definitions are deliberately broad-brush and require further negotiation and agreement. Several questions remain with regard to the clarification of these concepts and their interrelations: What exactly is the new requirement for accounting? How is accounting related to transparency and MRV? What is the difference between transparency and MRV? What type of information is covered by the ETF? Which elements of the existing MRV framework can be retained in building the ETF's modalities, procedures and guidelines (MPGs)?

The purpose of this paper is to shed some light on these questions and, in so doing, promote a better understanding of the requirements for the ETF and the accounting of NDCs under the Paris Agreement and provide a common terminological framework that takes into account the 'history' of the three concepts. In the negotiations, a common understanding and the differentiation of the concepts discussed is key to achieving progress. This is of particular relevance for those elements of the Paris Agreement that have not yet been fully fleshed out such as the accounting guidance/orientation (*Paragraph 31, UNFCCC 2015*) or the ETF MPGs (*Paragraph 98, UNFCCC 2015*). Furthermore, at the national level policy-makers and practitioners need to understand current and future requirements to, on the one hand, be able to cost-effectively set up and operate processes that comply with UNFCCC requirements and, on the other, inform and shape actions for achieving the Party's NDC.

The aim of this paper is therefore to clarify the three concepts and their interactions with a focus on developing country Parties. → **Chapter 2** provides a general overview of how the three concepts were first introduced and then evolved over time. → **Chapter 3** describes in detail each of the concepts' present functions and requirements (which remain valid until the transparency and accounting requirements of the Paris Agreement come into force). → **Chapter 4** provides a detailed analysis of the definition of the concepts and their interaction since the Paris Agreement. The findings from all the chapters are then synthesised in → **Chapter 5**.

2. Evolution of MRV, accounting and transparency

This chapter describes the outset of the concepts of transparency, MRV and accounting and of their associated requirements, and it explores their evolution over time, from the adoption of the UNFCCC to the adoption of the Paris Agreement.

With the adoption in June 1992 of the UNFCCC, Parties committed to stabilise ‘greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system’ (*UNFCCC 1992*). Under the Convention, Parties committed to measuring and reporting information necessary to evaluate and predict the status and progress on the stabilisation of GHG concentrations. Part of this work involved the development of national inventories of anthropogenic GHG emissions by sources and removals by sinks. Parties also committed to keep the Conference of the Parties (COP) informed about their implementation of the Convention and to communicate both the progress and the estimated effects of policies and measures for mitigating climate change. This information would become part of what is now known as *National Communications* (Articles 4 and 12, *UNFCCC 1992*).

A year after the UNFCCC entered into force on 21 March 1994, the first annual session of the COP (*COP 1*) took place in Berlin, Germany. During COP 1, the Parties discussed the need to establish a legally binding commitment to limit emissions, quantified in relation to 1990 levels as per *Decision 1/CP.1*, and they set the goal of reaching agreement on this commitment by the third session of the COP (*UNFCCC 1995*). At this early stage, **transparency** was seen as a principle that, when applied by Parties, would ensure clarity in their reporting obligations.

The first COP also saw the adoption of the first verification process under the UNFCCC.¹ For this, expert review teams, coordinated by a representative of the UNFCCC Secretariat, carried out in-depth reviews of the National Communications submitted by the Parties included in Annex I of the UNFCCC. This review excluded non-Annex I Parties.

1992

1994

¹ Decision 2/CP.1.

1995

Guidelines for the National Communications of non-Annex I Parties were adopted at COP 2 as part of *Decision 10/CP.2*. Evidence that **transparency** featured in the discussions can be found in *Decision 9/CP.2* that determines **transparency** to be fundamental for the success of the process to communicate and consider the information provided in National Communications, and to be particularly important for national GHG inventories and the assessment of policies and measures. Discussions also addressed the fact that, in order to ensure the **transparency** of information on climate change mitigation, it was essential to provide a level of detail sufficient to enable any third party to understand the objectives of the mitigation policies and measures, the degree of implementation, and how these factors will be monitored over time (*UNFCCC 1996*).



In 1995, before the second session of the COP (*COP 2*), the Intergovernmental Panel on Climate Change (IPCC) published its second assessment report (SAR), which suggested that, although the ability to quantify the anthropogenic influence on global climate was still limited due to the noise of natural variability, there was a discernible human influence on global climate (*IPCC 1995*). The SAR was one of the key inputs for COP 2, which took place in Geneva, Switzerland, in July 1996. Through the Geneva Ministerial Declaration, the Parties recognised and endorsed the SAR as the most comprehensive and authoritative assessment of the science of climate change, and they instructed the stakeholders representing them to accelerate negotiations on agreeing on a legally binding protocol for adoption at COP 3 (*The Geneva Ministerial Declaration, Annex, UNFCCC 1996*).

1997

COP 3, held in 1997 in Kyoto, Japan, marks a milestone in climate negotiations as it led to the adoption of the first legally binding agreement under the UNFCCC; the Kyoto Protocol (*UNFCCC 1998*). **Transparency** is included in the Protocol as a principle to be applied when reporting information. This is reflected in several of its *articles such as 3.3 and 3.4*, which require information on GHG emissions and removals from direct human-induced land-use change and forestry activities, limited to afforestation, reforestation and deforestation, and agricultural soils to be reported in a *transparent and verifiable manner* (*UNFCCC 1997*).

COP 3 also saw the introduction of **accounting**, which features in *Decision 1/CP.3*. This decision requests the Subsidiary Body for Scientific and Technological Advice (SBSTA) to define relevant principles, modalities, rules and guidelines, in particular for the verification, reporting and accountability of emissions trading in line with *Article 17* of the Kyoto Protocol (*Decision 1/CP.3, UNFCCC 1998*). With regard to determining the achievement of individual reduction commitments, *Article 7.4* of the Kyoto Protocol requests that modalities for the accounting of assigned amounts be decided prior to the first commitment period of the Protocol, namely 2008–2012 (*UNFCCC 1997*). Furthermore, *Article 8.1* of the Protocol requires an expert review of the annual compilation and accounting of emissions inventories and assigned amounts (*UNFCCC 1997*).

COP 4, held in 1998 in Buenos Aires, Argentina, focused on developing the plan to negotiate the various provisions of the Kyoto Protocol. A year later, during COP 5 in Bonn, Germany, Parties discussed the design of the so-called Kyoto Mechanisms that would assist in the accounting of GHG emissions and thus in assessing Annex I Parties' progress on their reduction commitments. The Kyoto Mechanisms sought to provide participating Annex I Parties with the flexibility to add or subtract from their initially assigned amounts through the trading of units of these amounts with other Parties as specified under *Article 17* (International Emissions Trading), *Article 6* (Joint Implementation) and *Article 12* (the Clean Development Mechanism) (*UNFCCC 2008*, p. 15).

Over this same period, Parties also discussed how to deliver technical advice to developing countries to improve the information contained in their National Communications. This led to Decision 8/CP.5 establishing the Consultative Group of Experts on National Communication from Parties Not Included in Annex I to the Convention (CGE), which was expected to assume a larger supporting role in the following sessions of the COP (*UNFCCC 2000*). The CGE comprised various thematic groups, such as national GHG inventories, vulnerability and adaptation assessments, mitigation and cross-cutting issues, and had the role of assisting developing countries to meet their reporting obligations under the UNFCCC.

From COP 8 onwards, the sessions focused on further developing the Kyoto Mechanisms and on supporting Parties to fulfil the ratification requirements for the Kyoto Protocol that would enable its entry into force. COP 8, held in 2002 in New Delhi, India, saw the increased participation of developing countries and the further development of guidelines for the national reports of these countries. At COP 10, held in 2004 in Buenos Aires, Argentina, Parties discussed how to improve developing countries' national reports, focusing on institutional arrangements, human capacities and technology transfer (*UNFCCC 2004*). The Kyoto Protocol finally entered into force on 16 February 2005.

In 2007, prior to COP 13 in Bali, Indonesia, the Intergovernmental Panel on Climate Change (IPCC) published its fourth assessment report (AR4), which was seen as a key input for the negotiations. Parties agreed that the *warming of the climate system was unequivocal and that any delay meant losing opportunities to stabilise the GHG levels in the atmosphere and an increase in the severity of climate change impacts* (*UNFCCC 2008b*). At COP 13, the consideration of developing-country climate action at the international level took a major step forward with the formal introduction in the Bali Action Plan of **MRV**. The introduction of MRV represented a major development for climate action as it integrated the responsibilities of both developed and developing countries to enhance their actions to mitigate climate change (*UNFCCC 2008*).

1998/99

2002/06

2007

2009

Under the Bali Action Plan, Parties launched a comprehensive process to **enable a full, effective and sustained** implementation of the Convention as soon as possible through cooperative action, and they provided for the setting of a long-term global goal for emission reductions to be agreed upon by COP 15 (*UNFCCC 2008*). This was later reinforced at COP 14, held in 2008 in Poznan, Poland, when Parties agreed to set by early 2009 the national reduction targets or measures for 2020 (*UNFCCC 2009*).

At COP 15, held in 2009 in Copenhagen, Denmark, there were high hopes that a new global agreement would be reached. However, numerous challenges arose that meant Parties were unable to deliver the much-needed agreement. While, in retrospect, this COP has been seen as a major failure, the work undertaken in Copenhagen did, in the long-term, provide lessons learned and set the scene for the much sought-after global agreement.

The Copenhagen Accord recognised and underlined the need for the increase in global mean temperature to be below 2°C. This called for an assessment by 2015 of the implementation status of the Copenhagen Accord, which also considered the option of strengthening the long-term goal to one where the rise in global mean temperature would remain below 1.5°C. Parties also accepted the commitment of Annex I Parties to implement economy-wide emissions targets for 2020, and that the delivery of reductions and finance by developed countries would be **measured, reported and verified in accordance with guidelines adopted by the COP to ensure that the accounting of such targets and finance would be rigorous, robust and transparent**. Non-Annex I Parties committed to developing mitigation actions, to being subject to domestic MRV processes and to communicating relevant information on their efforts in national reports every two years (*Decision 1/CP.15, UNFCCC 2010*). The CGE was also reconstituted for the 2010–12 period (*Decision 1/CP.15, UNFCCC 2010*).

2010

A key outcome of COP 16, held in 2010 in Cancun, Mexico, were the Cancun Agreements that drawn up by taking informal agreements reached at COP 15 and turning them into formal decisions. The **MRV** requirements agreed at COP 15 were complemented by elements such as the development of Biennial Update Reports (BURs), the International Consultation and Analysis (ICA) process, and the domestic MRV of domestically supported mitigation actions. These MRV requirements were very similar to but less prescriptive than those featuring in the Biennial Reports (BRs) required of Annex I Parties. Both the BRs and the BURs contained common elements that Annex I and non-Annex I Parties were required to communicate to the UNFCCC.

At COP 17, held in 2011 in Durban, South Africa, it was agreed that a legally binding climate agreement must be concluded no later than 2015 with the aim of raising global ambitions with regard to combating anthropogenic climate change. The Parties agreed to extend the Kyoto Protocol for a second commitment period that would function as a transitional arrangement leading to the new climate agreement. The guidelines for drawing up BURs and for the ICA process – which were similar to the reporting guidelines for Annex I Parties’ Biennial Report (BR) and the International Assessment and Review (IAR) – were also agreed.

At COP 18, held in 2012 in Doha, Qatar, discussions focused on reallocating the responsibilities and obligations between developed and developing countries. The first commitment period of the Kyoto Protocol ended in 2012, and the data arising from the accounting procedures set for and implemented during this period revealed the need for more ambitious reduction commitments, especially with regard to offsetting mechanisms; for example, the Clean Development Mechanism.

The roadmap for the new climate agreement was discussed in 2013 at COP 19 in Warsaw, Poland. Here, Parties were first introduced to the concept of **intended nationally determined contributions (INDCs)**, which were to form part of *Decision 1/CP.19 (UNFCCC 2013)*. This decision invited all Parties to either initiate or intensify domestic preparations for their intended nationally determined contributions by the first quarter of 2015, if they were ready to do so (*UNFCCC 2013*).

The final piece for establishing the **MRV framework** was put in place at COP 19 through the developing country Parties’ adoption in *Decision 21/CP.19* of the general guidelines for the domestic **MRV** of domestically supported nationally appropriate mitigation actions (NAMA). Unlike the BUR guidelines, these guidelines were worded in a way that avoids setting specific requirements. Instead the guidelines for NAMAs determine what developing country Parties could achieve to establish **MRV** arrangements of NAMAs.

Decision 19/CP.19 reached at COP 19 sets the modalities and guidelines for the team of technical experts tasked with performing the technical analysis of BURs as part of the ICA process. The CGE was assigned a broader mandate to provide developing countries with further support on their new obligations, and the Parties extended the CGE’s mandate from 2014 to 2018, after its preceding reconstitution for the 2010 to 2012 period, so it could also assist developing countries in meeting their reporting obligations as part of the BURs and could prepare for the ICA process.

2011

2012



The IPCC published its fifth assessment report ahead of COP 20 in Lima, Peru, to further support Parties in their discussions. The report was then welcomed in *Decision 12/CP.20 (UNFCCC 2014b)*.

2014

With countries now beginning to work on developing their iNDCs, COP 20 got underway in Lima, Peru. Here, the preparations for the new global climate agreement continued, with Parties reaching an agreement – included in *Decision 1/CP.20* as part of the Lima Call for Climate Action (*UNFCCC 2014b*) – that any mitigation contribution included in their iNDC should represent a progression beyond any current undertaking of each Party. In *Decision 1/CP.20*, Parties reiterated the importance of communicating their iNDCs by the first quarter of 2015 to facilitate the clarity, transparency and understanding (CTU) of the iNDC. They also requested the provision of upfront information, namely a list of suggested information for submission alongside their iNDC. This quantifiable information could include **the reference point of the mitigation contribution, the time frames and/or periods for implementation, scope and coverage, planning processes, assumptions and methodological approaches including those for estimating and accounting for anthropogenic GHG emissions, and, as appropriate, removals, and how the Party considers that its iNDC was fair and ambitious** (*Decision 1/CP.20, UNFCCC 2014b*).

2016

Parties began communicating their iNDCs by the first quarter of 2015, preparing the ground for a presumably tough negotiation at COP 21 in Paris, France. Here, the Parties were set to adopt a new global climate agreement, building on the failure of COP 15 and on the extensive preparations carried out since then. On 12 December 2015 the Paris Agreement was adopted by consensus and entered into force on 4 November 2016.² The new global climate agreement widely abandoned the distinctions formerly made between developed and developing countries.

² For the Paris Agreement to enter into force, at least 55 Parties representing 55% of global emissions were required to ratify it. In response to Article 21 of the Paris Agreement, a table was drawn up containing the most up-to-date information on GHG emissions by each Party. It is available at http://unfccc.int/files/ghg_data/application/pdf/table.pdf

2.1 Summary

While MRV, accounting and transparency have each evolved in their own way, they all prepared the ground for the Paris Agreement:

MRV only became a robust framework after COP 13, when specific obligations were adopted to enable developing countries to enhance their climate actions. The final elements of the MRV framework were decided at COP 19. Since then, developing countries have gained experience by communicating and enhancing their climate actions. The existing MRV framework will be superseded by the ETF MPGs.

Transparency was first introduced as a principle to ensure Parties provided information on their climate actions in a way that was sufficiently clear for other Parties to understand these actions. The principle of transparency has featured throughout the COP process, constituted a key element in the design of the Paris Agreement and prompted the creation of a comprehensive transparency framework.

Accounting began with the adoption of the Kyoto Protocol and the introduction of the first mitigation targets. Under both the first and second commitment periods, it became the key method for tracking Parties' compliance with reduction commitments. Under the Kyoto Protocol, only developed countries were set quantified emission limitation and reduction objectives, so only those countries were required to undertake accounting. However, since the formulation by all Parties of Nationally Determined Contributions and the adoption of the Paris Agreement, it has become mandatory for all.

3. MRV, accounting and transparency prior to 2020

The Paris Agreement established the Enhanced Transparency Framework (ETF). The modalities, procedures and guidelines for the ETF – which will eventually supersede the existing MRV framework – are to be considered at COP 24. This section explores how MRV, transparency and accounting are currently³ defined and how they will interact during the transitional period leading up to the implementation of the relevant provisions of the Paris Agreement, the ETF for action and support, and the accounting of NDCs. We will look, first, at how MRV interacts at the international and domestic levels in developing countries, then at how transparency is understood and implemented under the various decisions of the Convention and, finally, at the definition of accounting and how it functions under the Kyoto Protocol.

3.1 MRV

The concept of **measuring (or monitoring), reporting and verification (MRV)** has evolved from individual UNFCCC requirements aimed at promoting the uptake, tracking and communication of climate actions (i.e. mitigation and adaptation actions⁴), such as the mitigation of anthropogenic GHG emissions, and has over time become a robust framework. The MRV framework has been formulated gradually, being the product of various decisions taken at different sessions of the COP over the 2004–2013 period (UNFCCC 2014). While the MRV framework includes requirements for both Annex I and non-Annex I countries, this section solely focuses on the requirements for non-Annex I Parties.⁵

³ During the period prior to the application of the decisions of the Paris Agreement. The decisions are applied from 2020 onwards.

⁴ Adaptation actions are tracked through monitoring and evaluation (M&E), whereas mitigation actions are tracked using MRV.

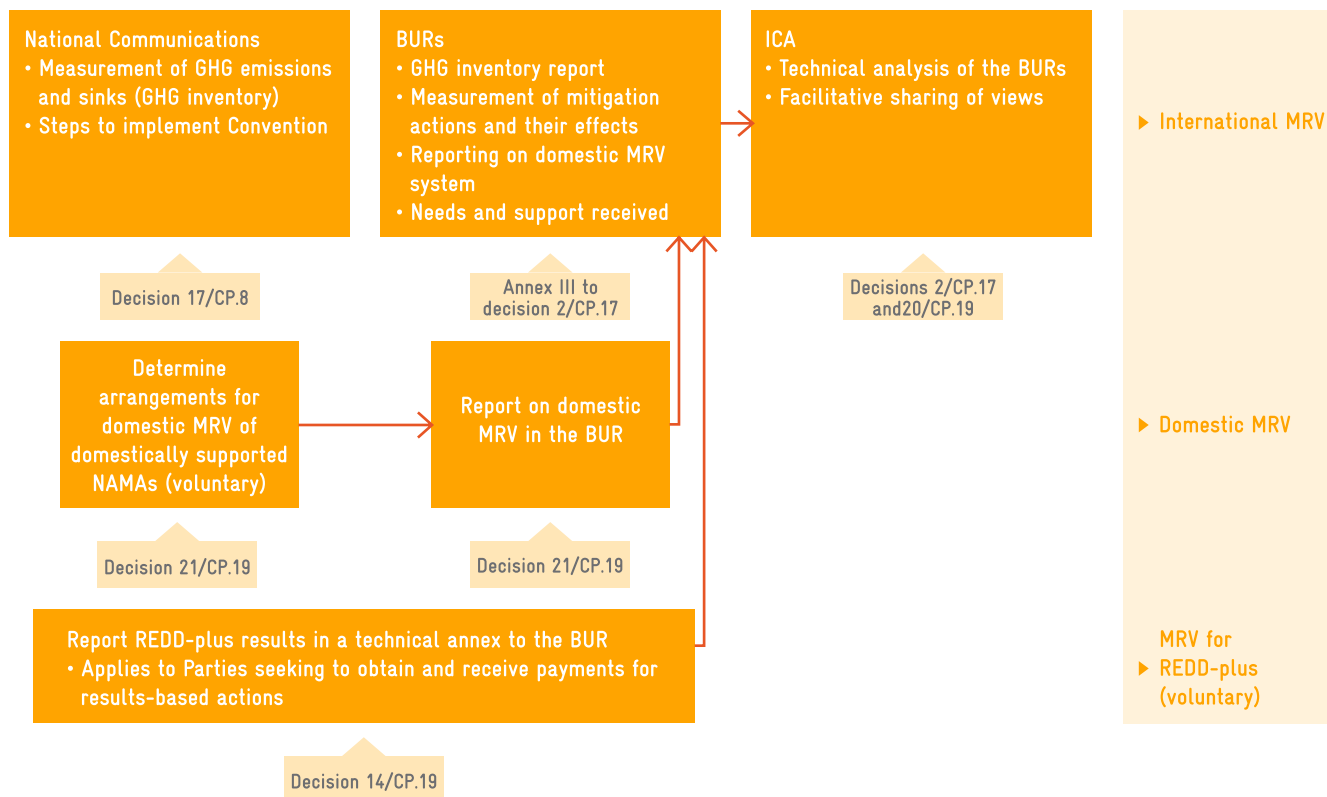
⁵ Content-wise, Annex I Parties' National Communications and Biennial Reports are fairly similar. Differences arise between their respective projection reporting requirements, and with the Biennial Report's requirement (where applicable) for information on progress made towards achieving the target. Review processes for both country groups in terms of their submitted National Communications and Biennial (Update) Reports have been established.

The objectives of the MRV framework are to:



While some elements of the MRV framework are applicable at the international level and some at the domestic level (→ see Figure 1), all of them are drafted in such a way that developing countries can understand the requirements. One thing they are not is prescriptive, as they provide countries with a certain level of flexibility with regard to implementation.

► **Figure 1. Elements of the MRV Framework**



Source: Reproduced from Figure 2 of the Handbook on Measurement, Reporting and Verification for Developing Country Parties (UNFCCC 2014a)

The international requirements of the MRV framework include the following elements:

- ▶ National Communications must be submitted every four years and must include information on national circumstances and institutional arrangements, national GHG inventories, steps taken or envisaged to implement the UNFCCC through mitigation and adaptation measures and programmes, other information considered relevant to the implementation of the UNFCCC (e.g. technology transfer, capacity building, research and systematic observation), barriers and gaps, and related financial, technical and capacity needs (*UNFCCC 2014*).
- ▶ The BUR, which must be submitted every two years, provides an update on the previous National Communication and covers national GHG inventories, mitigation actions and needed and received support. Support in this case may refer to financial, technical, and capacity-building. While it is mandatory for Parties to provide, as far as is practicable, information on their domestic MRV arrangements, reporting on REDD+ is voluntary and may be provided as an annex to the BUR. Similarly, the structure of the BUR does not require information on adaptation, but Parties wishing to provide this are permitted to do so (*UNFCCC 2014*).
- ▶ BURs are verified through the International Consultation and Analysis (ICA) process that is strongly geared towards supporting countries to improve their reporting over time. The ICA is a two-step process. In the first step, a team of technical experts conducts a technical assessment to ensure that the reports provide all the information required by the BUR guidelines and that this information is reported transparently (*UNFCCC 2012*). In addition, the team will seek to identify capacity-building needs for the Party under review. The second step involves a workshop process called the Facilitative Sharing of Views. Here, all Parties gather to present and discuss their most recent BURs communicated to the COP, an exchange that enables them to learn from the experiences of their peers.

The domestic requirements of the MRV framework focus on the implementation of the international guidelines at the domestic level and on preparing the information to be submitted in international reports according to the relevant guidance for National Communications and BURs.

When speaking about MRV at the domestic level, a broader definition of MRV is often used, which goes beyond the scope of the UNFCCC requirements. This definition considers any kind of data collection, management, review and reporting related to climate change mitigation requirements to be part of MRV. Three categories of domestic MRV processes and structures can be broadly derived from the UNFCCC requirements:

- ▶ **MRV of emissions** is conducted at the national, province/state, city and corporate levels, and the understanding it provides of GHG sources, sinks and reservoirs supports the objective of developing a GHG emissions inventory (*Singh et al. 2016*). GHG emissions inventory reports are a requirement of the National

Communications and BURs. MRV of emissions can also refer to inventory reporting under other initiatives, such as city-level initiatives like the Global Covenant of Mayors for Climate and Energy, or corporate reporting programmes like The Climate Registry and CDP.⁶

▶ **MRV of mitigation actions** is commonly employed to assess the GHG effects, and to a lesser extent the non-GHG effects, of policies and measures before, during and after their implementation (*Singh et al. 2016*). These policies and measures may include NAMAs and other mitigation activities such as Clean Development Mechanism (CDM) projects or programmes, and voluntary reduction (i.e. offsetting) projects. While the CDM is not part of the MRV framework under the UNFCCC, it boasts a wealth of experience in and is the main source of methodologies for the tracking of mitigation impacts from such measures. CDM methodologies and the experiences gained through their application are widely used as the basis for and to inform the assessment of GHG impacts from mitigation actions, including the CDM's requirements on data collection and monitoring equipment, on the calculation of baseline and project emissions and of the resulting emission reductions, and on reporting and verification/validation. As stated above, the MRV of mitigation actions compares the effects of actions experienced at two different reference points, typically comparing the actual reduction against a reference point or scenario. In practice, this generally means that project emissions (in presence of the activity) will be compared against baseline emissions (a historic or hypothetical scenario where the activity is absent).

▶ **MRV of support** promotes an understanding of the provision and receipt of climate support in the form of finance, capacity building, and technology transfer (*Singh et al. 2016*). Apart from using MRV of support for their UNFCCC reporting requirements under the MRV framework, developing countries also use this category of MRV to inform donors such as multilateral financial institutions (e.g. the World Bank), bilateral development cooperation agencies, or national public and private finance institutions. As reporting requirements can vary from donor to donor, complex systems may become necessary.

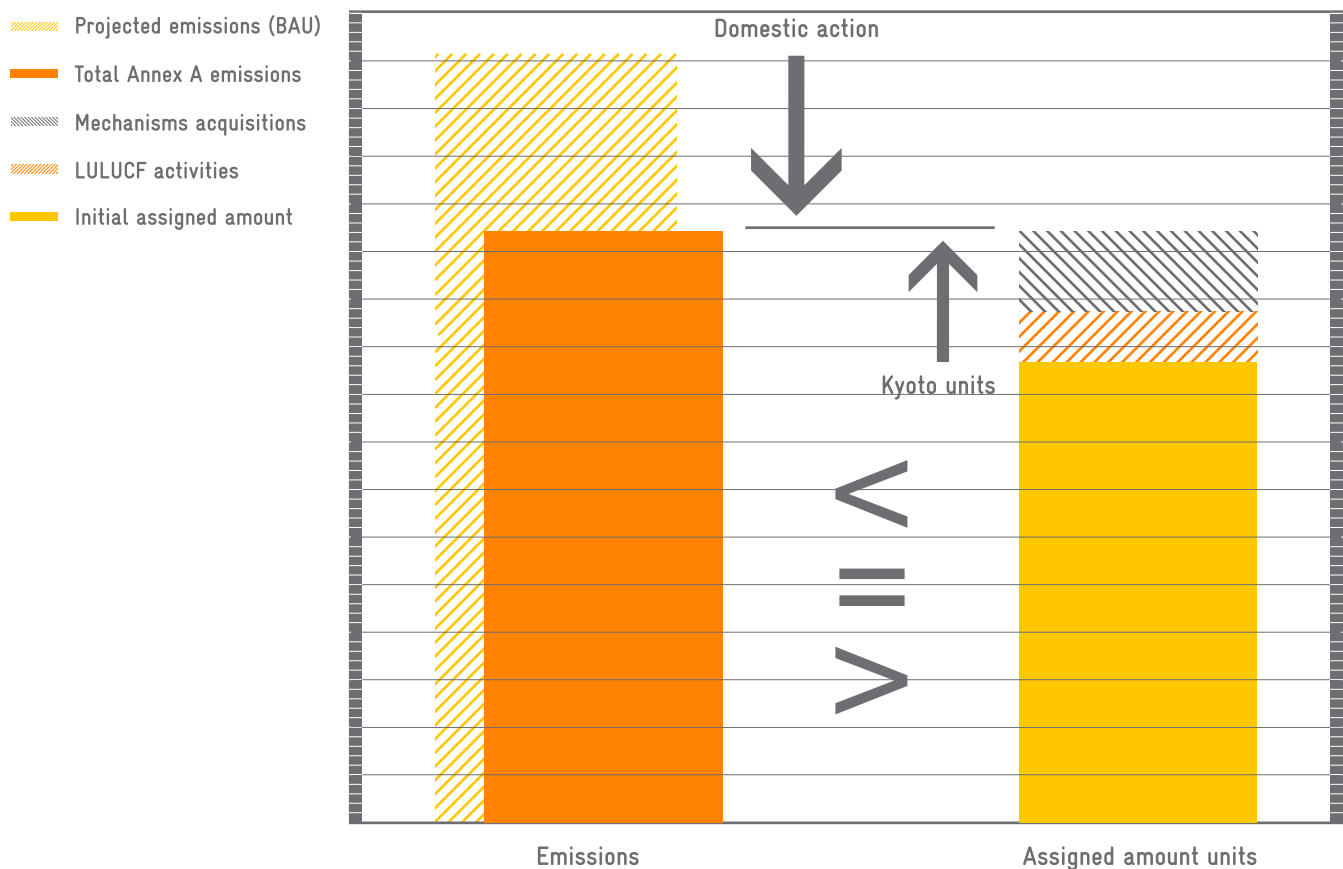
3.2 Accounting

For the purpose of this paper, accounting is defined as **the process and procedure for assessing the achievement of a mitigation target and, as such, is herein exclusively applicable to climate change mitigation**. At present, accounting requirements only apply to the Annex I Parties participating in the second commitment period of the Kyoto Protocol. Clear rules were set for Parties in terms of the information to be submitted to the Convention and how to use it when determining both the level to which the target GHG level has been achieved and the information to be compared to the target (*UNFCCC 2008*).

⁶ Formerly the Carbon Disclosure Project.

Accounting under the Kyoto Protocol is used to track compliance with emission limitation or reduction commitments and to understand whether this commitment has been reached within the time frame of the corresponding commitment period. Several of the accounting-related requirements indicate what information must be used and how. The targets set under the Kyoto Protocol are for GHG emission levels and only apply to Annex I countries. The key datasets to be used are the national GHG inventory and the registries relating to the flexibility mechanisms under the Kyoto Protocol, namely the Clean Development Mechanism (CDM), Joint Implementation (JI) and International Emissions Trading (IET). Accounting rules further specify how the target value and GHG emissions in the target period (e.g. 2008–2012 for the first commitment period) must be calculated. →Figure 2 describes how the Kyoto Protocol Mechanisms assist in determining compliance with *Article 3* of the Protocol.⁷

► Figure 2. Determining compliance with the Kyoto Protocol Mechanisms

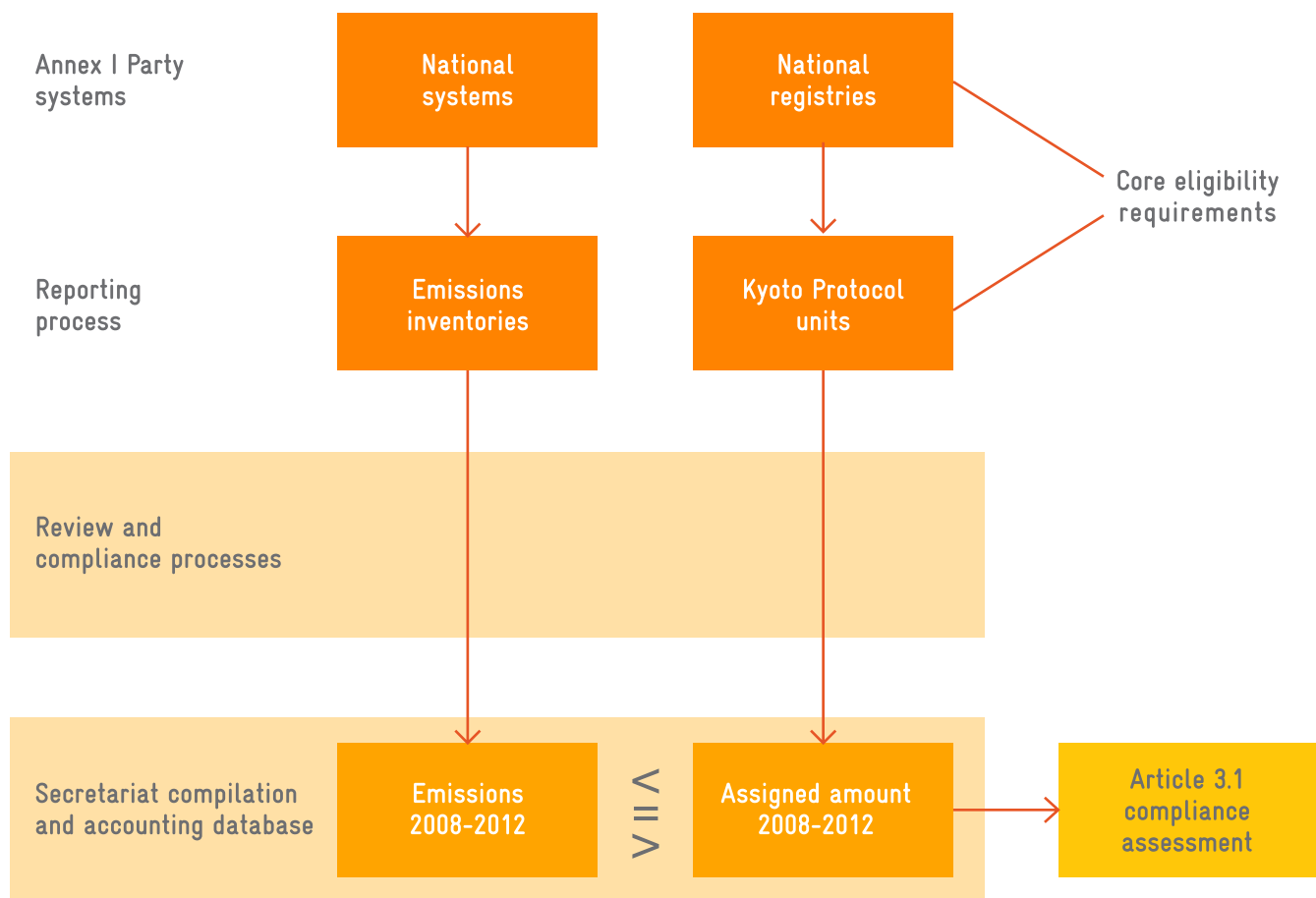


Source: Reproduced from the Kyoto Protocol Reference Manual (UNFCCC 2008a, p. 19)

⁷ The Kyoto Protocol Reference Manual provides comprehensive information on compliance with the Kyoto Protocol accounting system and the Kyoto Mechanisms, and explains these concepts in more detail. It is available at https://unfccc.int/resource/docs/publications/08_unfccc_kp_ref_manual.pdf

The relevant Annex I Parties must submit the required information on an annual basis and must include a national GHG inventory produced according to the IPCC 2006 Guidelines. This national GHG inventory is then reviewed under the UNFCCC. Two further reports must also be submitted to the UNFCCC: the report to facilitate the calculation of the GHG emissions allowed in the target period/year⁸. That is, the assigned amount⁹, known as the initial report¹⁰; and the report submitted when the additional period for fulfilling commitments expires, known as the true-up period report.¹¹

► **Figure 3.** Overview of the accounting system under the first commitment period of the Kyoto Protocol



Source: Reproduced from the Kyoto Protocol Reference Manual (UNFCCC 2008a)

⁸ A target period (2008–2012) was used for the first period of the Kyoto Protocol, whereas a target year (2020) has been set for the second period.

⁹ The Kyoto Protocol Reference Manual breaks down the definition of ‘assigned amount’ into ‘initial assigned amount’, defined as the quantity established under Articles 3.7 and 3.8, and ‘available assigned amount’ defined as the initial assigned amount plus any additions to or subtractions from the assigned amount through land use, land-use change and forestry (LULUCF) activities or the Kyoto Mechanisms (UNFCCC 2008a, p. 13).

¹⁰ http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/9498.php

¹¹ http://unfccc.int/kyoto_protocol/true-up_process/items/9023.php

→ **Figure 3** provides an overview of how the information process is structured to support the accounting and to assess the compliance of the Parties' actions.

It was agreed that the accounting rules would only apply to the commitments under the Kyoto Protocol, which meant they were not applicable for non-Annex I Parties presenting mitigation actions and pledges as part of the Cancun agreements¹² (*Briner and Moarif 2016b*). For this reason, developed and developing countries have had different experiences when it comes to accounting.

3.3 Transparency

Since the adoption of the UNFCCC, transparency has been recognised as a principle or good practice. On a technical level, transparency has been used as a principle; for example, how transparency is used for national GHG inventories. In this context, transparency implies the clear communication of the assumptions and methods used, so that users can replicate and assess the information in question (*Decisions 17/CP.8 and 18/CP.8, UNFCCC 2003*).

Transparency has also been a key pillar of the MRV framework. For example, an objective of the ICA process is to enhance the transparency of information on mitigation actions and their effects, and on the support needed and received.

Indeed, the application of transparency in National Communications is highlighted in *Annex I of Decision 9/CP.2* as fundamental to the success of the process to communicate and consider information, and of particular importance for inventories of GHG emissions and removals and for the projections and assessments of the effects of measures (*Section 7, Annex of Decision 9/CP.2, UNFCCC 1996*). It was highlighted that the communication of detailed information; for example, the objective of a mitigation action, its degree of implementation and how it will be monitored over time) is essential to facilitate transparency and ensure third-party understanding. However, experts have recently discussed how the level of detail and formats of the information provided in the BURs vary significantly and hinder the usefulness of the report (*Briner and Moarif 2016a; Lichte 2017*).

In UNFCCC decisions, transparency has been required to ensure clarity and understanding. That is, when those using the information provided by a Party, are able to understand it.

¹² <http://unfccc.int/resource/docs/2011/awglca14/eng/inf01.pdf>

4. MRV, accounting and transparency in the Paris Agreement

This chapter analyses and discusses the definition and interaction of the three concepts as set out in *Decision 1/CP.21*, which adopts the Paris Agreement, and in the Paris Agreement itself, which is annexed to this Decision.

Each concept as it applies to the Paris Agreement is first presented individually, then the interactions between the concepts are discussed.

4.1 MRV

MRV is only mentioned twice in *Decision 1/CP.21*. The future of the existing MRV framework is determined in paragraph 99 of the Decision, which states that ‘the modalities, procedures and guidelines [MPGs] of this transparency framework shall build upon and eventually supersede the measurement, reporting and verification system established by *decision 1/CP.16*, paragraphs 40 to 47 and 60 to 64, and *decision 2/CP.17*, paragraphs 12 to 62, immediately following the submission of the final biennial reports and biennial update reports.’ This statement clearly connects MRV and transparency, indicating that, while the current MRV framework will cease to exist, it will to a certain extent form the basis for the ETF MPGs.

As for the decisions mentioned in paragraph 99, *Decision 1/CP.16* establishes extended reporting requirements for National Communications, introducing, among other things, the requirements for Biennial Update Reports for developing countries and Biennial Reports for developed countries as well as the development of MPGs for these reports (*UNFCCC 2011*). For developing country Parties, these MPGs specify the content to be provided in BURs and the role of ICA as a review process (*see Annexes III and IV to Decision 2/CP.17*). So, from a developing-country perspective, the impact of paragraph 99 of *Decision 1/CP.21* is that all requirements for National Communications and BURs, as well as the BUR review process in the form of the ICA, will be superseded by the ETF MPGs.

The stipulation that the ETF MPGs must build upon the existing MRV framework presents an opportunity to retain successful elements and, at the same time, to enhance the system by drawing on the lessons learned in the countries and generally (see for example, existing good practice analyses).

The second mention of MRV in *Decision 1/CP.21* is found in paragraph 105(e), which urges Parties to participate in the existing MRV framework to demonstrate progress on their mitigation pledges pre-2020.

4.2 Accounting

Article 4.13 of the Paris Agreement requires Parties to account for their NDCs. Specifically, they must account for the emissions and removals corresponding to their NDC based on agreed methodologies and common metrics assessed by the IPCC (which thus far have been GHG inventory methodologies) and adopted by the CMA, and Parties must strive to include all sources and sinks. Accounting guidance will be developed according to paragraph 31 of *Decision 1/CP.21*, and will seek to ensure methodological consistency (including on baselines) between the communication and implementation of NDCs. According to paragraph 32 of *Decision 1/CP.21*, Parties must apply the accounting guidance from their second NDC onwards, but they may choose to also apply it to their first NDC.

Not all Parties have set quantitative mitigation targets in their NDC. While it remains to be clarified how such targets (e.g. non-GHG-related quantitative targets like renewable energy or energy efficiency targets, or targets related to the implementation of specific mitigation measures) are to be accounted for, *Article 4.4* of the Paris Agreement encourages a convergence towards economy-wide mitigation targets over time: ‘Developed country Parties should continue to undertake absolute economy-wide mitigation targets, while developing country Parties are encouraged to, over time and in light of their national circumstances, move to economy-wide mitigation targets’.

A number of principles must be adhered to when accounting for GHG emissions and removals, such as environmental integrity, transparency, accuracy, completeness, comparability and consistency, and ensuring the avoidance of double counting (*UNFCCC 2015*). Transparency, accuracy, completeness, comparability and consistency (TACCC) are well-known as the principles employed in the compilation of national GHG inventories.

The avoidance of double counting is also addressed in *Article 6.2* of the Paris Agreement, specifically in relation to cooperative approaches. According to this article, Parties engaging on a voluntary basis in cooperative approaches involving the use of internationally transferred mitigation outcomes (ITMOs) for their NDCs must apply robust accounting to avoid double counting. Furthermore, they must promote sustainable development and ensure environmental integrity and transparency (*UNFCCC 2015*). To avoid double counting, *Article 6.5* states that ITMOs ‘shall not be used to demonstrate achievement of the host Party’s nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution’. The use of ‘achievement’ here can be seen as a link to accounting. Paragraph 107 of *Decision 1/CP.21* urges transferring and purchasing Parties to transparently report on ITMO

transfers, again with a view to promoting environmental integrity and avoiding double counting. This is not, however, matched by a specific reporting requirement under the ETF.

Developing country Parties have experience of generating and selling reduction certificates – e.g. under the CDM or voluntary mechanisms. However, they have very limited experience of dealing with certificate trading in situations where the international transfer of certificates may have an impact on the domestic target.

Paragraph 36 of *Decision 1/CP.21* requests that guidance be developed on the avoidance of double counting. Different to the accounting guidelines, the double-counting guidelines must be applied from the first NDC onwards.

A topic not directly addressed by *Decision 1/CP.21* and the Paris Agreement is accounting for land use, land-use change and forestry (LULUCF). Various approaches exist for reporting this under national GHG inventories, the second commitment period of the Kyoto Protocol and REDD+. These approaches differ in a number of ways, such as whether they relate to changes on a specific area of land or to specific activities, or whether emissions and removals are compared to a historical value or not (net–net vs gross–net) or to a baseline. In their NDCs, a number of Parties have indicated the different accounting approaches they intend to use for the LULUCF sector. Guidance for accounting would need to clarify which approaches should be applied, and the ETF MPGs would need to specify what information should be reported for which approach.

4.3 Transparency

While *Decision 1/CP.21* and the Paris Agreement use the word transparency in different ways, their respective uses of the word do share a common principle of facilitating clarity and understanding. Herein we will focus on the understanding of transparency as it is defined in *Article 13* of the Paris Agreement, which establishes the Enhanced Transparency Framework.¹³

The ETF established by *Article 13* has the aim of building mutual trust and confidence among Parties and of promoting effective implementation. The ETF refers to both developing and developed countries, whereas the MRV framework has differentiated rules for each group. That said, *those developing country Parties that need it in the light of their capacities* are entitled to flexibility (*Article 13.2, UNFCCC 2016*), and this entitlement is to be reflected in the ETF MPGs.

¹³ Another instance of the use of 'transparency' is repeated in paragraphs 13, 25, 27 and 28 of *Decision 1/CP.21*, which name clarity, transparency and understanding as three principles to be facilitated through the communication and submission of Parties' INDCs and the specific information included therein. Further guidance will be developed on the information to be provided to facilitate the three principles.

Article 13 of the Paris Agreement states that the ETF will build on and enhance the transparency arrangements under the Convention. In this way, it further specifies the provisions of paragraph 99 of *Decision 1/CP.21* that require the ETF MPGs to build on and eventually supersede the MRV framework. *Article 13* names National Communications, Biennial Reports, Biennial Update Reports, International Assessment and Review and International Consultation and Analysis as examples of transparency arrangements under the Convention. All the elements for international reporting under the current MRV framework are therefore fully included. Even the terminology used has shifted from MRV to transparency, with the cited mechanisms referred to as transparency arrangements rather than arrangements under the MRV framework.

The ETF's role with regard to action and support is defined in *Articles 13.5 and 13.6*. Action refers to both mitigation and adaptation. It is the ETF's aim with regards to action 'to provide a clear understanding of climate change action in the light of the objective of the Convention as set out in its *Article 2*, including clarity and tracking of progress towards achieving Parties' individual nationally determined contributions under *Article 4*, and Parties' adaptation actions under *Article 7*, including good practices, priorities, needs and gaps, to inform the global stocktake under *Article 14*. With regard to support, the ETF's aim is 'to provide clarity on support provided and received by relevant individual Parties in the context of climate change actions [...], and, to the extent possible, to provide a full overview of aggregate financial support provided, to inform the global stocktake under *Article 14*.

A key element of the ETF, the information to be provided by Parties under the framework, is specified in *Articles 13.7 to 13.10*. Paragraph 90 of *Decision 1/CP.21* requires the periodicity of the reporting to be at least biennial, except for least developed countries and small island developing states, which can submit the information at their discretion. The information to be provided is as follows:

- ▶ A national GHG inventory based on IPCC methodologies agreed by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA).
- ▶ 'Information necessary to track progress made in implementing and achieving [the Party's] nationally determined contribution under *Article 4*'. While the term 'accounting' is not used, *Article 4*, which includes the mitigation part of both the NDC and the accounting, is referenced. The nature of the information to be submitted is, however, not specified.
- ▶ Information on climate change impacts and adaptation in line with *Article 7* of the Paris Agreement, which addresses adaptation. In particular, *Article 7.10* requires Parties to provide an 'adaptation communication, which may include [the Party's] priorities, implementation and support needs, plans and actions, without creating any additional burden for developing country Parties' and which should be updated and reported regularly.

► Information on climate finance, capacity building and technology transfer, summarised as support. A differentiation is made between developed and developing country Parties. Developed country Parties and other Parties providing support must report on the support provided to developing country Parties. Meanwhile, developing country Parties must report on the support they need and receive.

While the information to be provided and the reporting process itself have yet to be defined in detail for the MPGs, Parties have already gained experience in reporting national GHG inventories, mitigation actions and support under the existing MRV framework. The information required to track progress made in **implementing and achieving** the NDC has not been defined in the ETF. Implementation and achievement do, however, both feature in *Article 13.12* as criteria for consideration in the technical expert review of the information submitted on NDCs. The kind of information that will actually be needed or appropriate largely depends on the contributions defined in each Party's NDC. It should be pointed out that, while the ETF does not explicitly ask for information on single mitigation actions, it is likely that information on mitigation actions will be included in some form that draws on the experiences gained from the existing MRV framework (i.e. the BURs, National Communications and other transparency arrangements under the UNFCCC). Remember that the MRV framework will form the basis of and be enhanced by the ETF.

While *Articles 13.7 to 13.10* address reporting issues, *Articles 13.11 and 13.12* define the technical review process for this information (i.e. a verification element). This process has two steps: a technical expert review and a facilitative, multilateral consideration of progress related to the support provided and to the implementation and achievement of the Party's NDC. While detailed information on this review process has yet to be provided through the ETF MPGs, these two steps bear a certain similarity to the existing review processes, namely International Assessment and Review (which reviews the Biennial Reports of Annex I Parties) and International Consultation and Analysis (which reviews the Biennial Update Reports of non-Annex I Parties).

Both the International Assessment and Review (IAR) and the International Consultation and Analysis (ICA) processes consist of a technical assessment step and a dialogue step. The technical assessment under the ICA is defined as 'analysis', which implies a less rigorous process than that employed in the IAR, where a 'review' takes place. The process under *Article 13.12* of the Paris Agreement, which is referred to as 'technical review process' can therefore be expected to be more rigorous than the technical analysis under the current ICA process.

Just like the technical assessment step of the ICA, the review process will include assistance in identifying capacity-building needs, particularly for those developing country Parties where the supply of relevant capacities is an issue. It is important to understand the focus of the ICA and IAR review processes: both seek to determine whether the information required by the respective guidelines is provided in a transparent manner. The accuracy, comparability and consistency of the national GHG inventory data reported is not

reviewed under these processes. At present, national GHG inventories of Annex I Parties are reviewed under a separate UNFCCC review process. *Article 13* of the Paris Agreement does not give a clear indication of whether the review specified in *Articles 13.11 and 13.12* would include a dedicated review of the national GHG inventory.

Some ambiguity remains about which parts of the reported information must be reviewed. *Article 13.11* mentions the information referred to in *Articles 13.7 to 13.9*, namely all of the information to be provided under the ETS (listed above) with the exception of the support received and needed by developing countries. *Article 13.12* mentions the support provided and the implementation and achievement of Parties' NDCs. The relevant information would therefore vary depending on each Party's NDC.

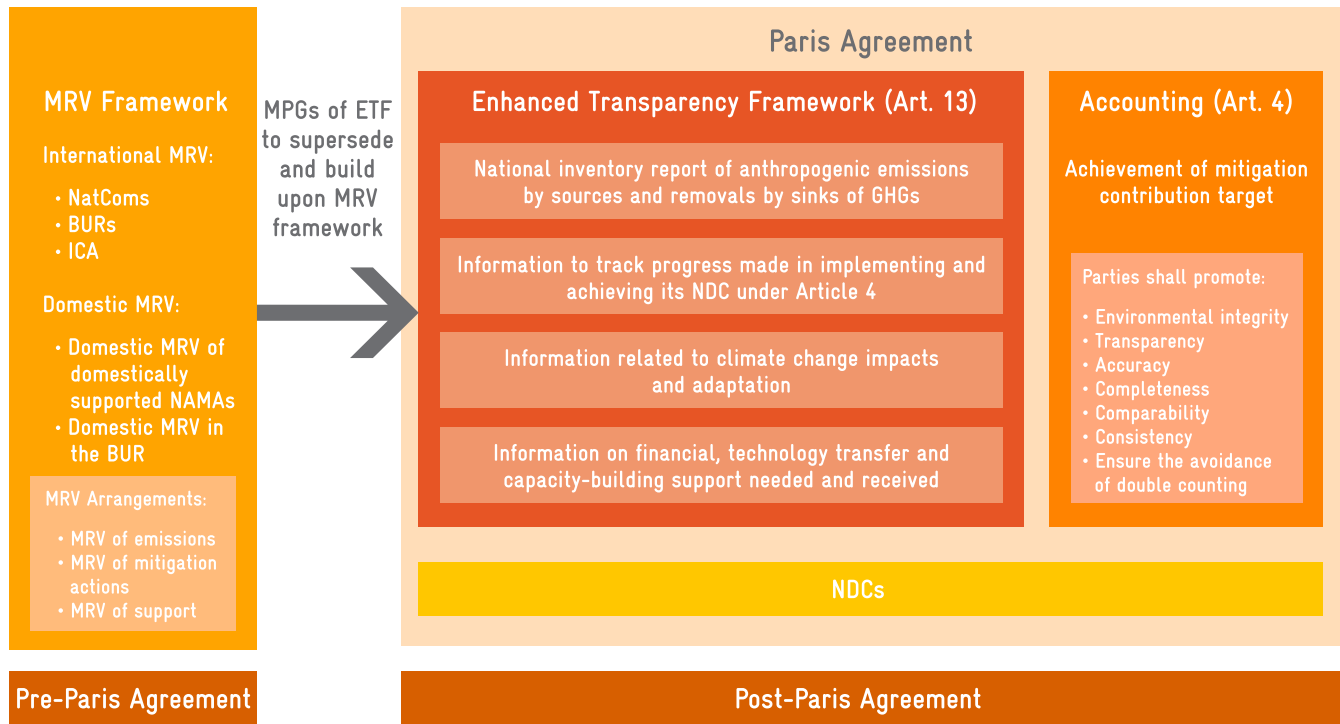
Where a Party has included a target that is conditional upon the receipt of international climate finance, one would expect the finance received to be reviewed in line with the provisions of *Article 13.12*, as it is integral to the achievement of the NDC. However, *Article 12.11* does not confirm this to be the case.

Not all information requests are shall-requirements. Information on climate change impacts and adaptation, support received and needed, and support provided by Parties that are not developed country Parties are should-requirements. In this way, developing country Parties are provided with greater flexibility.

When comparing the Enhanced Transparency Framework and the MRV framework, a basic difference in structure is apparent. Reporting requirements under the MRV framework have informally often been categorised as MRV of emissions (the national GHG inventory), of mitigation actions and of support. The ETF refers to action and support only. Note that action now covers both mitigation and adaptation.

4.4 Summary

► Figure 4. Transition from the MRV framework to the Enhanced Transparency Framework and accounting



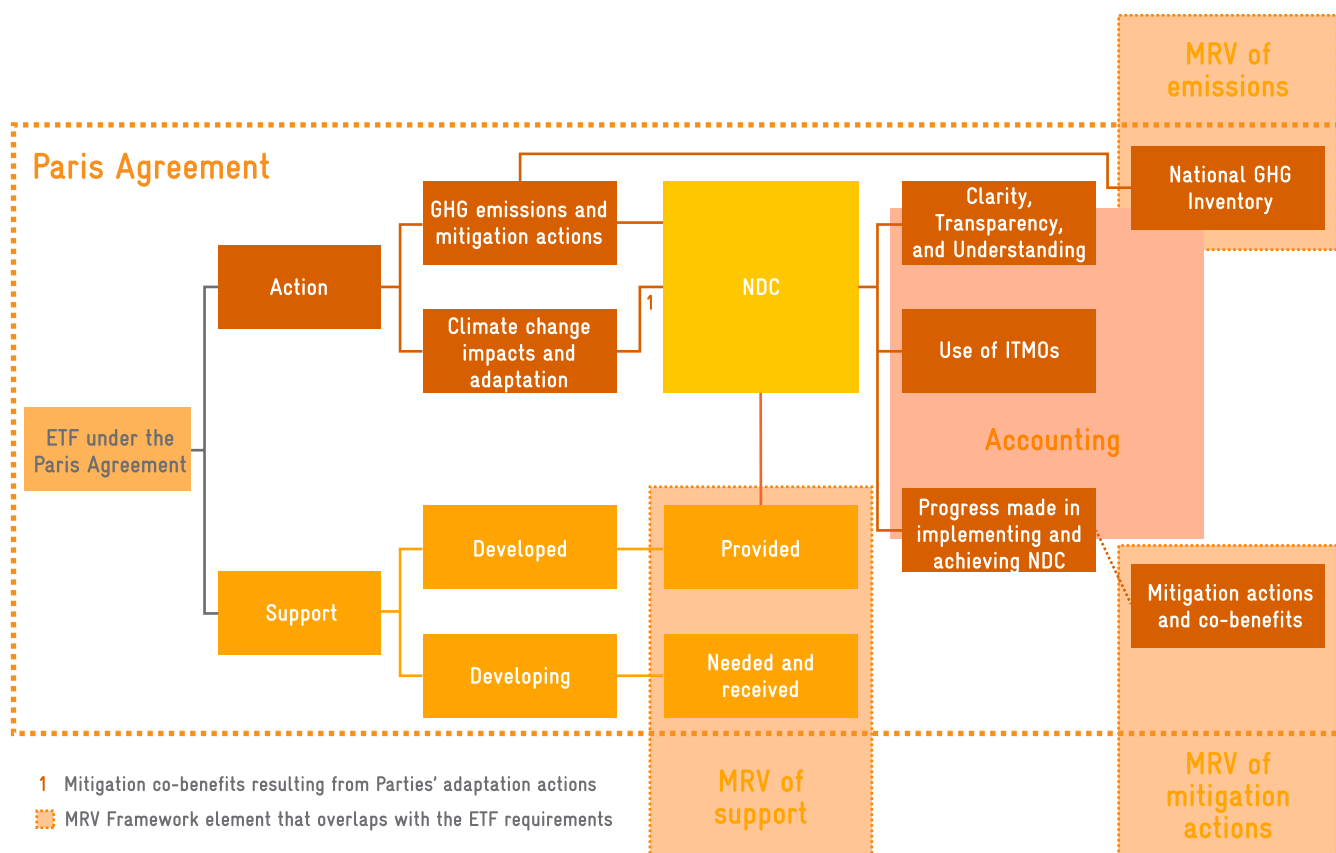
Under the Paris Agreement, only two of the three concepts – namely transparency and accounting – have a role to play. The ETF and its MPGs will build upon the existing MRV framework and the experiences gained thereunder and will ultimately supersede the framework. The only features of MRV remaining will be those elements of the existing MRV framework that end up being retained and/or enhanced under the ETF MPGs (→ Figure 4).

While accounting does not form part of the ETF, it is defined in a separate article of the Paris Agreement. The ETF can, however, be understood to have a strong link to accounting in that it provides the information necessary to track progress towards the achievement of NDCs according to *Article 4*, where accounting is defined. The exact nature of this information remains to be determined for the ETF MPGs, the accounting guidelines and potentially also the guidelines for the avoidance of double counting.

The requirements contained in the accounting guidelines will have a direct impact on the information to be provided through the ETF. It is therefore of the utmost importance that the development of these guidelines be strongly aligned to avoid any inconsistencies, gaps or overlaps.

5. Discussion

► **Figure 5.** Diagram detailing the ETF process and accounting under the Paris Agreement and indicating overlaps with the MRV framework



The three concepts of transparency, MRV and accounting have evolved considerably over the course of the various UNFCCC negotiations and they are strongly interlinked.

Since the adoption of the UNFCCC, transparency has been used as a principle of clarity applicable to the information reported by Parties (e.g. national GHG inventory reports). Transparency in the context of the Paris Agreement has served as a key principle for ensuring clarity in the accounting of NDCs and, over time, has developed into a

framework in the form of the ETF (→ [Figure 5](#)). The ETF requires information that is also relevant to the accounting of NDCs (i.e. information necessary to track progress made in achieving a Party's NDC under *Article 4*). → [Figure 5](#) shows where reporting requirements under the ETF overlap with the existing requirements under the MRV framework (specifically MRV of emissions, MRV of mitigation actions and MRV of support). Given that the existing MRV framework, which bundles most transparency-related provisions, will be superseded by the ETF MPGs, it does not feature in the Paris Agreement.

Under the Kyoto Protocol, accounting has been key for understanding the progress and achievements made by Annex I Parties on their emission limitation and reduction commitments. As a methodology, accounting for mitigation contributions is thought to be more complex under the Paris Agreement because of the diversity of the types of mitigation contribution included in the NDCs. The information required for accounting will be sourced from different items of information provided under the Paris Agreement, including the GHG inventories (National Inventory Reports are required under the ETF) and information on cooperative approaches (e.g. ITMO transfer) (→ [see also Figure 5](#)). As countries without a mitigation target under the Kyoto Protocol still lack experience in setting up and operating accounting systems, it is crucial to share existing lessons learned, build up new experiences, provide capacity building and provide exchange formats.

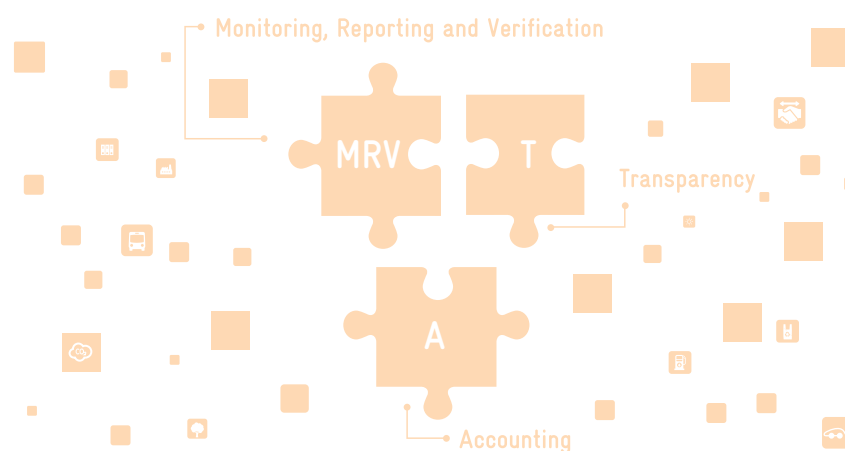
The development of the ETF MPGs presents yet another significant opportunity for developing clear and efficient reporting requirements. This can be achieved by building on the lessons learned from existing reporting and review processes under the UNFCCC, such as the BUR and ICA for developing countries and national GHG inventory reviews for developed countries. Indeed, further clarification of the level of detail and scope of the information to be provided would allow concise – and thus more efficient, targeted and comparable – reporting. Flexibility could be retained by those countries needing it and could be adjusted in line with those countries' existing capabilities.

Developing countries have put in place institutional arrangements and data-collection processes at the national level to meet the reporting requirements of the MRV framework. While the exact scope and level of detail of information to be reported under the ETF has yet to be agreed, it appears that the reporting requirements for Parties to the Paris Agreement will remain largely the same (e.g. national GHG inventory reports, mitigation actions, support needed and received). The provision of information related to climate change impacts and adaptation remains voluntary. Information needs will largely depend on a country's specific NDC. Existing structures and processes can therefore, with some adjustments, provide the foundations for the systems needed for compliance with the ETF MPGs.

The experiences gained through the MRV framework are of great value in helping to shape the development of the ETF MPGs. The transitional period leading up to the point when the ETF and accounting of NDCs become operational presents a crucial

opportunity to build capacities and enhance reporting requirements with regard to transparency and cost-effectiveness and, ultimately, to facilitate understanding of the progress made towards achieving the objectives of the Paris Agreement. At the country level, this period provides an opportunity to pilot and/or continue developing cost-effective tracking systems differentiated according to the country's NDC, its existing capacities and capabilities, and the design of its national (climate) policy. And, last but not least, it is at the country level, that there might be further information requirements of mitigation action, achievement or even performance that go beyond the requirements at the UNFCCC level (i.e. beyond the requirements of the ETF and on NDC accounting).

This is important to keep in mind, especially when it comes to already established structures at the national level and the question of how to align these structures with the new requirements from the Paris Agreement.



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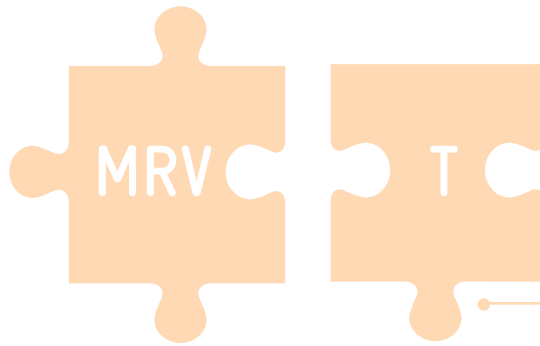
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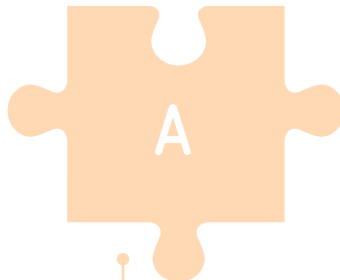
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Monitoring, Reporting and Verification



Transparency



Accounting

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