

## Up-Front Information for emission reduction contributions in the 2015 Agreement under the UNFCCC

Background Paper

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## List of Abbreviations

ADP	Ad Hoc Working Group on the Durban Platform for Enhanced Action
AILAC	Independent Association of Latin America and the Caribbean
AOSIS	Alliance of Small Islands States
BAU	Business-as-usual
COP	Conference of the Parties
CTF	Common Tabular Format
GDP	Gross domestic product
GHG	Greenhouse gas
GTP	Global temperature potential
GWP	Global warming potential
IPCC	Intergovernmental Panel on Climate Change
LDC	Least developed Countries
LMDC	Like-minded developing countries
LULUCF	Land use, land use change and forestry
MRV	Measurement, Reporting and Verification
Mt	Mega tonnes (1 million tonnes)
NAMA	Nationally appropriate mitigation action
QELRO	Quantified emission limitation and reduction objective
SIDS	Small Island Developing States
UNFCCC	United Nations Framework Convention on Climate Change

## Summary

This background paper elaborates on the ongoing discussions about the up-front or ex-ante information that Parties shall provide together with their nationally determined emission reduction contributions for the post-2020 climate agreement. Due to the fact that mitigation contributions are determined nationally by each Party without any agreed types or elements, these contributions are expected to comprise a whole spectrum of diverse types of targets. For that reason, up-front information is necessary to make them transparent, comparable and quantifiable related to the progress needed to achieve the 2°C objective. Additionally, it promotes mutual understanding and trust among the Parties and it will point to the level of ambition implied by countries' proposed targets. Explanation of equity and fairness considerations should also be addressed by up-front or ex-ante information by countries when setting their contributions.

General elements which the up-front information should comprise for all types of contributions include

- Information to understand the contribution (including inter alia: target year or target period, base year or base period or reference, gases included, sectors included, metrics to calculate the impact of GHG emissions, approach to account for emissions and removals from forests and land use);
- Expected use of international market-based mechanisms;
- Expected need for financial support;
- Background information to understand the ambition of the proposed contribution (including inter alia: description of relevant national circumstances; past emission trends as well as projections of GHG emissions; assumptions related to mitigation potentials and mitigation costs; description of domestic mitigation targets; policies implemented or planned to achieve the contribution).

In addition, the specific types of contributions require additional elements of up-front information. For targets relative to a projected business-as-usual (BAU) scenario for example, the individual elements of the methodology for establishing the BAU scenario should be explained. For intensity targets, additional information related to the specific index used (e.g. GDP or population) is necessary. Carbon neutrality targets require information on the accounting approach used for carbon neutrality, how emissions from the land sector will be accounted for, and an explanation whether and to what extent units from international market mechanisms or other compensation activities/ credits will be used to reach the target. For sets of policies and measures or mitigation action it will be most sensible to ask for qualitative up-front information describing the intended policies or actions in detail as well as for future quantified expected emission reductions where effects of policies or mitigation action were quantified.

Parties take diverging stances on the question of up-front information: The EU, the US and New Zealand have made elaborated and detailed proposals regarding the elements to be included in the up-front information provided by Parties in submissions to the UNFCCC. Other Parties propose only lists of elements while a number of developing countries oppose the whole idea of having a spectrum of contributions and therefore reject the notion of up-front information. It is essential to find common ground on the question of up-front information at the ADP session in June 2014 in order to pave the way for agreeing on a decision at COP 20 in Lima framing up-front or ex-ante information requirements underlying ambitious contributions by all countries in the post-2020 climate agreement.



## 1. Introduction

A new international agreement for the post-2020 period is currently being negotiated by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP). These negotiations are set to culminate in the adoption of such agreement at the 21<sup>st</sup> Conference of the Parties (COP 21) in December 2015 in Paris. At COP 19 in Warsaw, it was decided that Parties should intensify the preparation of their intended nationally determined contributions so that they can be communicated “well in advance of the 21<sup>st</sup> session of the Conference of the Parties (by the first quarter of 2015 by those Parties ready to do so)”. Additionally, the COP decided that these contributions should be developed “in a manner that facilitates the clarity, transparency and understanding of the intended contributions” and that the information which Parties will provide when putting forward their contributions shall be identified by the ADP at COP 20 in 2014 (UNFCCC, 2013).

In 2014, the ADP is thus tasked with preparing for the decision on “up-front information” or “ex-ante information” which should accompany the nationally determined mitigation contributions that Parties will propose. This paper elaborates on the ongoing discussions on which elements up-front information should comprise. In chapter 2 the concept of up-front information is set out and defined, chapter 3 describes previous approaches to clarifying Parties’ pledges and chapter 4 explains and compares the positions on the question of up-front information of a number of key Parties in the negotiations.

## 2. The concept of up-front information

### 2.1. Purpose

Up-front information refers to those pieces of information on the nature, assumptions and methodologies underlying an emission reduction contribution<sup>1</sup>, which are necessary in order to understand what the “headline numbers” of the contributions (e.g. an emission reduction target of 40% by 2030) is based on and which emissions it includes. Such information is crucial because Parties will determine these contributions in a national process without specific rules or boundaries, which is likely to lead to a variety of heterogeneous contributions designed in different ways.

Thus, up-front information on the contributions is necessary in order to provide transparency. It intends to clarify all conditions and assumptions the contribution might be based upon and to explain how planned emission reductions were calculated.

Such ex-ante information is also the precondition to compare different contributions. If they vary to such great extent that a comparison is impossible in relative terms, they can only be assessed against each other in absolute terms, i.e. by comparing implied Mt CO<sub>2</sub> equivalents. That way, it can be evaluated whether the contributions are individually ambitious and it can be assessed whether they are fair and in accordance with responsibilities and capabilities. Up-front information should also as far as possible enable a ‘conversion’ of different target types to compare targets, e.g. an intensity target can be converted in an absolute target relative to a base year if the assumed GDP projection is available. Mutual understanding among Parties about the emission reductions associated with the proposed contributions can promote trust in the negotiations and enable dialogue about possible enhancement of Parties’ ambition.

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<sup>1</sup>Some Parties interpret the decision from Warsaw in a way that these “contributions” do not only refer to mitigation targets but also to contributions in terms of finance, adaptation technology transfer and capacity-building. For the purposes of this paper, we will focus on mitigation contributions though. The term “contribution” is therefore used to refer to emission reductions while keeping in mind that other interpretations are possible and have been proposed

Ultimately, transparency about the emission reductions implied by the proposed contributions will also be necessary in order to evaluate the aggregate impact of all contributions on the global emissions level and to assess progress towards keeping emissions at a level that is sufficient to reach the 2°C target (Levin, Rich, Finnegan, & Dagnet, 2014; Morgan, Tirpak, Levin, & Dagnet, 2013).

Up-front information is different from accounting rules: it asks countries to provide information on the nature and elements of their contributions (i.e. whether units from market mechanisms will be used for reaching the target) and on general information how the achievement of targets will be 'counted', e.g. against which baseline, and whether it is ambitious. Accounting rules specify ex-ante rules that clearly determine how emission reductions, the contribution of removals or the use of flexible mechanisms are counted towards a specific target in a common, agreed system (i.e. how/to what extent/at what point in time/etc. units from market mechanisms will be used to reach the target). Assumed accounting rules that define the individual contributions can be specified in the up-front information by countries on an individual basis (e.g. intended accounting for LULUCF to reach the target). Yet, such assumptions should not replace the establishment of common rules for accounting at international level, e.g. for the use of international credits.

The need for up-front information arises in a particular way in the situation of a spectrum of contributions, in which no types of contributions are defined, but where Parties can prepare their domestic contributions for a common agreement without any specified guidance. The up-front information thus is a first step for presenting the contributions in a way that enables an assessment in which areas common accounting rules are required and the formulation of accounting rules on the basis of this assessment at a later point in time. The up-front information is also important to assess whether additional needs will arise in the future related to methodological guidance, reporting and verification, e.g. when contributions would include elements for which neither methodological guidance nor reporting requirements are available under the UNFCCC. The same applies to the needs to develop rules for the use of units from international market mechanisms – only when up-front information indicates that Parties intend to use new types of market mechanisms it makes sense to start additional work under the UNFCCC in this area.

Related to the concept of up-front information is the proposal to introduce "bounded flexibility" for setting post-2020 contributions (cf. Hood, Briner, & Rocha, 2014). According to this idea, some aspects that define mitigation contributions shall be agreed upon internationally (such as coverage of gases and sectors). If Parties want to deviate from such agreed standard, they need to explain why they 'opt out' from a rule, while they can 'opt in' voluntarily to other rules which are not fixed for all Parties internationally (e.g. for the LULUCF sector). Bounded flexibility thus seeks to strike a balance between the need for harmonized rules and flexibility in a situation where it is difficult to agree on accounting rules for a variety of contribution types.

An important function of up-front information could also be to explain the ambition of the contribution which can be measured in different ways, e.g. the trend in specific indicators would show the specific improvement and the trend change could be compared to past improvements or across Parties. Reporting of BAU projections and assumptions on mitigation potentials and costs as part of up-front information are also useful for the assessment of ambition of the contribution in relation to those contributions proposed by other Parties as well as in relation to achieving the 2°C target.

A separate category of information is that on equity and fairness of the contribution. The discussion about equity principles is a complex debate in itself and interpretations of these concepts of equity and fairness vary widely. Some authors highlight equity principles and fairness as a central piece of information that should accompany countries' proposed emission reduction contributions (e.g.



Haites, Yamin, & Höhne, 2013). Some country submissions (e.g. USA) suggest that the countries provide information on their self-chosen equity principle and how it relates to their contribution. Other countries have proposed that an equity reference framework is agreed upfront that determines possible ranges of contributions (e.g. South Africa and African Group). The contributions would then also include information on how the contributions relate to the equity reference framework.

Such information as part of up-front information would inform, but not replace an assessment phase<sup>2</sup> of quantified proposals for emission reduction contributions once they have been made. Additionally, different interpretations of equity will lead to different reporting as part of up-front information which may lead to a situation that the reported information may not be comparable and consistent across countries and may not allow an assessment without taking into account additional information from other sources. Elements of possible information to be reported are listed in section **Fehler! Verweisquelle konnte nicht gefunden werden..**

## 2.2. General up-front information relevant for all types of contributions

The elements to be included in the up-front information are subject to debate. In the following, the information required for transparent and comparable information on the nationally determined contributions are set out in further detail related to general information and specific contribution types. The approach has been to elaborate rather comprehensive up-front information requirements with the intention not to miss any important elements. The negotiation process is likely to reduce the number of information items in finding common ground and in agreeing on a minimum set of information requirements. Nevertheless, it seems useful to describe up-front information needs in a comprehensive and technically detailed way to assist those Parties interested in transparency of their information and to assist in the selection of significant elements for the negotiation process.

### 2.2.1. Up-front information elements for all types of mitigation contributions

The following list includes elements which define the contribution as well as the implementation of the contribution over time:

- Type of target and quantified target value(s),
- Target year or target period, any interim target(s) established,
- Base year or base period or reference,
- Gases included,
- Sectors included,
- Percentage of total anthropogenic emissions covered,
- Geographic boundaries,

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<sup>2</sup> The EU has proposed an international assessment of individual and collective ambition of contributions in the light of the 2°C target as part of its step-wise approach in its submission made in September 2013 (EU, 2013). According to this proposal, the definition of up-front information is the first step for determining commitments in the 2015 agreement, followed by the formulation and proposal of commitments by Parties, an international assessment of these proposed commitments and the final inscription of the commitments in the 2015 agreement.

- Metrics used to calculate the impact on individual gases such as Global Warming Potentials (GWPs) and methodological basis of emission estimation (IPCC Guidelines),
- Any other specific conditions or circumstances (e.g. for the EU the fact that a target is achieved jointly).

### 2.2.2. Approach to account for emissions and removals from forests and land use

The assumptions related to the accounting of emissions and removals from forests and land use, can have a large impact on total net emissions in some countries and accounting modalities have been a continuous area of debate under the Convention and the Kyoto Protocol. Therefore up-front information related to forests and land use should include the following:

- Forest and land categories that are included in the contribution;
- Scope of forest and land use categories included in the contribution compared to the inventory LULUCF sector;
- The reference against which emissions and removals from forests and land use are accounted as well as assumptions and methodologies used to establish the reference, if applicable;
- Any additional assumed accounting rules for forests or land use, e.g. related to the effects of natural disturbances, human-induced vs. natural impacts or for the accounting of harvested wood products,
- Any specific monitoring and accounting periods used for emissions from forests and land use that diverge from accounting of emissions from other sectors.<sup>3</sup>

### 2.2.3. Expected use of international market-based mechanisms;

Another category of up-front information relates to the choice of Parties to use international carbon markets to achieve their nationally determined contributions. Corresponding up-front information requirements would entail:

- Expected use of units from international market-based mechanisms already established under the Kyoto Protocol;
- Expected use of other international market based mechanisms:
  - description of the types of other international market-based mechanisms that are part of the contribution,
  - origin of such market mechanisms outside or inside the country;
  - description of any rules or standards used for MRV, any participation requirements and participating entities,<sup>4</sup> if applicable;
  - description of any tracking mechanisms for units used, if applicable;

<sup>3</sup> Some countries do not have reliable annual data in the forest and land use sector, but such data is collected in larger time intervals, in particular when forest inventories are used. This data situation may lead to an assumed accounting approach in the forest and land use sector that makes use of the intervals in which data is collected.

<sup>4</sup> E.g. for a regional market-based mechanism the participating countries.

- Any approaches assumed for banking and borrowing of units between different commitment periods<sup>5</sup>.
- Any quantification of the expected use of international market based mechanisms or limits applied to such use.

#### **2.2.4. Background information to understand the ambition of the proposed contributions**

- Description of relevant national circumstances;
- Past trends of GHG emissions and removals as well as projections of GHG emissions with and without mitigation actions, including a description of the approaches, methods, models and key assumptions used. For this information references to publicly available documents where such information is provided may be sufficient as it is not expected that up-front information will result in similar length as national communications;
- Any results of sensitivity analyses or uncertainty analyses conducted related to the contribution or references to such analyses;
- Assumptions related to mitigation potentials and mitigation costs or; references to background information related to mitigation potentials or mitigation costs;
- Information on co-benefits associated;
- Trends and projections for population and GDP;
- Description of any mitigation-related targets adopted domestically, if available, in particular long-term targets and how the contribution is consistent with such long-term targets;
- Comparison of contributions with independent studies providing top-down analyses and model results of emission reductions necessary to achieve the 2°C target;
- Key mitigation policies implemented or planned to achieve the contribution and/ or references to relevant domestic plans, strategies and legislation and discussion of relation to proposed contribution;

#### **2.2.5. Background information related to equity and fairness**

There is no agreed approach how equity or fairness considerations should be operationalized to establish contributions for a 2015 agreement. Thus, information requirements in this area may ask for general information related to the following aspects:

- Whether the national contribution was determined taking into account global equity and fairness considerations;
- Which approaches and concepts were used to operationalize equity and fairness considerations (e.g. responsibility, capability, equality, cost effectiveness (e.g. equal marginal abatement costs));
- How these principles were implemented, which calculation methods and major assumptions were made for each principle taken into account (e.g. base year of calculations); Findings

<sup>5</sup> The term commitment period is used here as an established concept in the negotiations even though Parties have agreed at COP 19 to refer to “contributions” instead of “commitments” (see also footnote 6).

justifying why the proposed contribution is considered to be equitable and fair based on the approaches and concepts assumed;

- Range of effort sharing emission allocations and target year for calculation, if available;
- Assumptions on global pathway chosen in calculation including stabilization level (esp. 2 °C or 1.5°C) and pathway assumed (e.g. immediate action, delayed action), if applicable;
- References to any underlying studies and reports conducted;
- Any references to independent studies providing results based on a specific operationalization of equity and fairness considerations across several countries.

### **2.2.6. Background information related to finance and support needed**

Developing countries that submit nationally determined contributions may depend on international support for the implementation of the contributions. It would be useful if the support needs would already be part of the up-front information. This information aspect was also addressed by several developing countries during the ADP session in March 2014 and could include the following:

- Expected need for international support (finance, technology, capacity building) for the implementation of the contribution for developing countries;
- Expected own financial contributions;
- Expected use of international financing sources other than international markets.

### **2.2.7. Discussion**

It is important to point out that parts of the information listed above are more difficult to prepare and politically sensitive than others. For example, information related to mitigation potentials and mitigation cost curves are not readily available for all countries, and if this information is available, it varies heavily with regard to underlying methods and assumptions. Additionally, such information is closely linked to questions of efficiency as well as fairness of sharing of mitigation efforts to reach the global 2°C target and relevant for investment decisions and economic development of countries. For that reason, it might be difficult to reach agreement on the question to what level of detail this information is to be provided and the lists above may be read more in the way 'if such information is available and has been prepared for the determination of the national contribution, it should also be provided to the international level'.

It is also important that the compilation of up-front information should not result in such a burden that its compilation delays the submission of nationally determined contributions. On the other hand, the information listed above is often part of the information needed anyway at national level to prepare and decide on nationally determined mitigation contributions. Therefore, it is not an additional exercise to get this information, however it may be an additional burden to compile the necessary elements for the up-front information. For large parts of the background information listed above, it seems more useful if Parties published related reports on the internet and provided references to these publications. Such procedure would ensure transparency without the need for an additional time-consuming information compilation exercise. Many Parties have national provisions to conduct impact assessments or conduct stakeholder consultation processes to determine national contributions. For the purposes of such consultation processes or assessments the related information is usually accessible online anyway.

### 2.3. Information relevant for specific types of contributions

As different types of contributions include very different elements, the information required beyond the general elements mentioned above varies between the specific contribution types. Additionally, the level of inherent uncertainty differs between the contribution types so that some types will require additional information because they are based on more complex methodologies (e.g. main assumptions to project the business-as-usual (BAU) development trajectory of a country for a contribution referring to a BAU scenario instead of a fixed base year).

In case a country proposes multiple types of contributions there might be overlaps and interlinkages between the different targets. A further requirement for the up-front information to the information listed below should therefore be information on the expected links and interactions between multiple proposed contributions in that case. Estimations of the impact of the contributions in terms of emission reductions should also include an estimate of the aggregate impact of the various targets or actions in addition to estimations of the impact of the individual targets in order to account for possible reinforcements between them and to prevent double counting (cf. also Hood et al., 2014, p. 14 ff.).

#### 2.3.1. Quantified absolute emission targets relative to a certain base year

Quantified absolute emission targets specify the percentage of overall emissions to be reduced until a certain target year or during a specified commitment period relative to a historical base year. This contribution type is straightforward in terms of its assumptions and methodologies if it is set to apply economy-wide and not just to individual sectors or certain gases only. The main factors determining the level of ambition of this type of contribution are whether emissions and removals from LULUCF are included and whether/to what extent units from international market mechanisms are used to reach the target. For this target type, the elements described above in section 2.2 (which are mainly derived from previous experiences with quantified economy-wide emission limitation and reduction targets) would apply.

Under the Kyoto Protocol for this target type base year emissions were fixed during the commitment period. Thus, specific information may be useful whether Parties intend to fix their base year emissions for the new agreement or whether they intend to reflect inventory recalculations of the base year emissions throughout the new commitment period.

Developing countries as well as the EU and other developed countries demand that those Parties who had economy-wide emission reduction targets in the past should also have them in the post-2020 period. Quantified absolute emission reduction targets represent the continuation of targets under the Kyoto Protocol which are considered to be the 'best practice' approach due to completeness in terms of sectors and gases and the straightforward way how emission reductions of individual Parties can be added to calculate the aggregate global emission reduction effect. The preference for this target type may also be related to the rather straightforward way how quantified economy-wide emission reductions can be monitored based on GHG inventories. A change to other target types for countries that currently have quantified absolute targets is thus sometimes considered as a change to a target type of 'lower priority' because those other target types imply a greater degree of uncertainty in reaching the desired impact.

### 2.3.2. Quantified absolute targets relative to a projected BAU emissions level

This form of contribution specifies a percentage of overall emissions to be reduced until a certain target year relative to a projected emissions level under a business-as-usual (BAU) or baseline development. As part of the 2020 pledges under the Convention, Brazil, Chile, the Republic of Korea, South Africa, Indonesia, Israel, Kyrgyzstan, Mexico, Papua New Guinea and Singapore have set themselves quantified targets relative to a BAU scenario.

This target type is more complex from a transparency perspective as a variety of factors impact the calculation of the BAU scenario which the target is based upon. For that reason, up-front information should explain the individual elements of the methodology for establishing the BAU scenario:

- Starting year used for BAU/ baseline development;
- Past trends of emissions (and removals) consistent with the BAU scenario (this information allows a conversion of the planned emission reduction into an absolute target against a historic reference year and seems therefore important for the comparability with other contribution types).
- Projected emissions (and removals) trends in BAU scenario for the period until the target;
- Clarification of whether the BAU projection is fixed or whether it will be adapted to changing circumstances dynamically over the target period and for which reasons such a change of the BAU is envisaged. Methodological consistency between the calculation of emissions during the period and the calculation of the BAU projection seems to be an acceptable change because such correction avoids that emission reductions are only computational effects from the methodological change;
- Projected emissions trends in a scenario with adopted policies and measures/ mitigation action, if available (it may be relevant to see whether the emission reductions compared to BAU as proposed in the contribution is the same, higher or lower compared to the projected emissions with adopted policies or actions);
- Key assumptions used in the projections, such as population trends, GDP trends, fuel prices, carbon prices, energy demand until the target year etc., if they were used for the BAU scenario;
- Information on the methodology and models used to calculate the BAU scenario as well as of sensitivity analysis conducted for key parameters such as GDP or fuel prices;
- Comparison of BAU projections with any independent sources of BAU projections from different countries or results of peer reviews of BAU projections conducted and description of why proposed BAU differs from these.

### 2.3.3. Intensity targets

Contributions can also be set as targets to reduce the emissions intensity of the economy in terms of GHG emissions per unit of output (index) such as GDP, population or energy use (Levin & Finnegan, 2013). Intensity targets related to GDP have already been set in China and India so far.

For this type of contribution, additional information to those items listed in section 2.2 is required

- Past trends of GHG emissions (and removals) as well as projected future GHG emissions (and removal) trends until the target year/ target period;



- Past trends of the specific index used (e.g. GDP or population) from the base year to current year and projected future trend of the index until the target year/ target period;
- Methodologies and underlying assumptions to project the index chosen (GDP/population growth/energy intensity).

#### 2.3.4. Carbon neutrality targets

Carbon neutrality targets are contributions that aim to reduce GHG emissions to a specific fixed net emissions level in a target year or target period, namely zero. In principle, technologies exist today to replace 90% of today's global emissions in longer-term timeframes (Höhne & Deng, 2013). Remaining amounts of domestic emissions, in particular in shorter time-frames up to 2030, would need to be compensated by CO<sub>2</sub> removals or offsets. It is also important whether the target applies to a single target year or to average emissions in a future time period.

Costa Rica for example has communicated that it “will implement a ‘long-term economy-wide transformational effort to enable carbon-neutrality’ that will help the country to significantly deviate from business as usual GHG emissions projected scenarios from now on up to 2021 and beyond” (Costa Rica, 2010). The submission describes which sectors and concrete policies and measures efforts will be focused on and refers to bilateral and multilateral cooperation and development entities as well as markets as crucial factors to expand its efforts and meet projected climate change goals. Besides Costa Rica, Bhutan, Iceland, the Maldives, Norway and New Zealand have also announced carbon neutrality targets.

Additional information required for carbon neutrality targets comprises:

- Past trends and projected future trends of total GHG emissions and removals as well as for sectors;
- Information on the accounting approach used for carbon neutrality, e.g. what elements are included in the balance that should equal zero and what are the methodologies used for these elements;
- To what extent units from international market mechanisms will be used to reach the target and how double counting by the selling and buying country towards their contributions will be avoided;
- Whether other compensation activities/credits will be used in the balance and whether those activities take place within the country or in a different country.
  - If credits/compensation activities are used from activities within the country, how double counting of emission reductions is avoided with the emission reductions or removal enhancement of the country;
  - If credits/compensation activities are used from emission reductions outside the country, how double counting is avoided with potential mitigation contributions of these countries under a 2015 agreement and how double counting is avoided with other countries accounting for compensation activities/credits from the same originating countries.
- How emissions and removals from the land and forest sector will be estimated and accounted in the carbon neutrality system;

- Information on whether there are mitigation activities in the country that sell credits to countries or institutions outside the country and how the carbon neutrality system accounts for such activities.

### **2.3.5. Sets of policies and measures/mitigation actions/projects with quantified mitigation effects**

Some Parties have submitted policies or mitigation actions or mitigation projects for which mitigation effects were quantified or for which other quantified indicators were provided.

Relevant up-front information for this type of contribution includes

- Description of the planned interventions included in the policy/measure/project;
- Legal status of the policy/measure and timeframes of planned implementation;
- Ex-ante estimation of the remaining GHG emissions after implementation and the reduction effect of the policy/measure/project estimated for target year/period and methodology to estimate GHG effects of the policy/measure/project including description of uncertainties;
- Information on the reference used for the GHG emission reduction effect, e.g. whether the reduction effect is compared to a situation without the policy intervention or compared to emissions in a year prior to the policy intervention;
- Other quantified targets or indicators used for the policy/measure/project and information how the reference and target values are established, provision of relevant definitions used for quantified policy targets;
- Potential interactions with other reported policies/measures/projects and whether or how those interactions have been addressed in the quantification.

### **2.3.6. Sets of policies and measures/mitigation actions without quantified mitigation effect**

Sets of policies and measures or mitigation actions form the most heterogeneous type of contribution and some measures are very difficult to quantify. Some policies and measures may even be defined in a way that is not intended to make them quantifiable at all. Furthermore, a number of non-Annex I countries prefer action-based contributions instead of outcome-based contributions, meaning that they are not geared towards reaching a specific emissions reduction but the act of implementing a certain policy such as a low-carbon urban planning policy corresponds to the achievement of the target.

For this type of policy, it will be most sensible to ask for qualitative information describing the intended policies and measures in detail. Relevant up-front information for this type of contribution includes

- Description of the planned interventions included in the policy/measure/project;
- Legal status of the policy/measure and timeframes of planned implementation;
- Information how it is intended to monitor the implementation of the policy/action/project.



- Information whether quantification of the impacts is intended to be performed ex-post or whether ex-ante quantification of impacts is part of the planned activities.

Some Parties expressed the views that only quantifiable contributions should be part of a 2015 agreement. However, the decisions so far taken under ADP do not limit contributions to quantifiable contributions. For some developing countries, such as LDCs and SIDS it may also be difficult to develop quantifiable mitigation actions and from some small developing countries the potential mitigation effects are very small due to the low emissions in such countries. From a global perspective, it may not be very essential to quantify outcomes of their mitigation actions, but it should be allowed that such poor countries that do not have the capacities to quantify their contributions can also participate in a 2015 agreement applicable to all Parties.

### **2.3.7. Other types of contributions**

There are a variety of other possible contribution types, e.g. energy efficiency targets, renewable targets, forest related targets which have in common that they are not quantified in terms of GHG emissions, but in terms of other quantified targets (e.g. targets for renewable generation, energy efficiency improvement or areas for reforestation).

Some of these targets could also be converted into emission reduction targets, based on some parameters (e.g. GHG emission factors for electricity based on current fuel mix from generation), but such parameters may not be available when the nationally determined contribution is presented. For such types of contributions information would be useful that includes the following:

- Which quantified indicators are used to measure the implementation of the contribution;
- Past and projected trends until the target year/ period for these indicators.
- Information related to the policies to implement these targets.

## **2.4. Format for upfront information**

Up-front information could either be presented in a template/tabular format or in textual form and thus in a more qualitative way. A tabular format has been proposed by the World Resources Institute (Dagnet, Levin, Rich, & Finnegan, 2014) and by the USA in their recent ADP submissions (USA, 2014).

A template/tabular format seems to guarantee comparability and consistency across countries and a lower degree of flexibility for the reporting country and ensures that exactly the same information is available from all Parties. Information in a template form is also easy to aggregate and compare and provides a good overview.

However, there are also a number of reasons for presenting the information in a textual format and for developing general reporting requirements for up-front information in a decision under ADP instead of a template.

Firstly, the absence of a definition of types of contributions as part of the spectrum of contributions makes it is very difficult to define a complete template that addresses all relevant information aspects. The uncertain situation could be better addressed by drafting more general reporting requirements than a template that describes the purposes and objectives of the up-front information. This requires that countries analyse which information is relevant for the required purpose, while in a template countries would assume that a completion of the template is sufficient,

even when this would not yet address all aspects of their specific contribution. The information that would be available in text form are not expected to be less significant than information which could be obtained through tables and do not mean a less accurate regulation. The biennial reports that were submitted for the first time by Annex I Parties in January this year are a case in point: due to the heterogeneity of information the data provided in the tables of the common tabular format is sometimes less relevant than the qualitative information that Parties have included in their reports. Some information on the targets was too complex to fit into a standardised tabular format. This is likely to apply to the information on countries' contribution types for the 2015 agreement as well.

Secondly, experience shows that agreement on a template or tabular format is a more complex negotiation process that takes more time than reaching an agreement on some textual elements within the UNFCCC, because the exact wording of categories included in a template may already be considered as prejudging on accounting rules or types of contributions by some countries. The development of a template for the reporting in biennial reports for Annex I Parties was very difficult in this respect and could only be achieved in ministerial consultations one year after the agreement on the general information requirements in Durban. Given the lack of time under ADP and the urgency to define up-front information by COP 20 in Lima, it may be preferable to design a number of up-front information requirements in a COP decision without developing a template.

Thirdly, templates and tables have the tendency to request quantified information in areas where only qualitative information may be available at the point of time when this information has to be provided. Such templates are therefore difficult to fill in. Examples in this respect are the template for the clarification of pledges or tables in the biennial reports which requested the exact amounts of units from flexible mechanisms that will be used to comply with the 2020 targets or anticipated 'carry-over' of units. Parties will only determine these amounts when they know how emission trends will develop, thus most countries could not yet provide such information.

### 3. Up-front information on earlier pledges under the UNFCCC

The requirement to provide up-front information in order to make nationally determined emission reduction contributions transparent and comparable presents a new approach in the international negotiations under the UNFCCC.

To establish targets under the Kyoto Protocol, the target types and rules were clearly specified in the Protocol for most elements, so that there was no need to provide any further up-front information to make the targets transparent.

For the 2020 targets, pledges were only clarified after they had been made and inscribed. A process for the international assessment of emissions and removals related to the targets was implemented in order to clarify the underlying assumptions, conditions and methodologies of the targets to make them comparable and transparent. Detailed information on the assumptions and conditions of the targets were thus only available a few years after the targets had already been set. As part of the process related to the clarification of Cancún pledges, a template was developed by the ADP-LCA chair with support from the secretariat clarifying quantified economy-wide emission reduction targets of developed country Parties (UNFCCC, 2012). This template requested the following information:

Assumptions and conditions related to target

- Base year
- % reduction from base year

- Period for reaching target
- Inventory methodology used

#### Coverage of Greenhouse Gases

- List of gases and option to specify base year for each gas

#### Global Warming Potential Values

- Selection of option

#### Coverage of Sectors

- Option to select sectors

Emission values and anticipated use of emissions/removals from Land use, land-use change and forestry and carbon credits from market-based mechanisms to clarify the target

- Emissions excluding LULUCF in base year
- Emissions/removals from LULUCF included in base year
- Emissions in base year used for calculation of target
- Emissions excluding LULUCF in target year
- Anticipated emissions/removals from LULUCF included in target year
- Anticipated use of carbon credits from market-based mechanisms
- Anticipated carry-over of carbon credits

#### Expected emission reductions in kt CO<sub>2</sub> equivalent

Indicating the equation used for calculating the expected emission reductions in kt CO<sub>2</sub> equivalent (estimated as emissions in base year minus emissions excluding LULUCF in target year plus anticipated emissions/removals from LULUCF included in target year minus anticipated use of carbon credits from market-based mechanism minus anticipated carry-over of carbon credits)

#### Role of LULUCF

- Indication of accounting approach and activities included

#### Carbon credits from market-based mechanisms

- Indication of type of mechanisms total contribution and contribution of individual mechanisms

Assumptions and conditions related to the ambition of the pledge.

Experiences for the development of up-front information templates could also be drawn from the requirements and CTF tables for biennial reports. In these reports, Annex I Parties have to report on their targets and the achievement of 2020 targets. The first biennial reports were submitted at the beginning of 2014 and the information contained in them provides further insights. In its submission related to the experiences with the biennial reports, the EU raised the point that sufficient flexibility should be provided for Parties to report on all relevant aspects of their mitigation

targets. From the EU's point of view it would have been useful if parallel targets could be explained together with the 2020 target under the Convention (see section 2.3). This seems to be a relevant issue also related to the upfront information.

The experiences with the template for targets in the biennial reports of Annex I Parties also show that the more comprehensive textual reports provide more complete and relevant information for the understanding of the targets than the information provided in the target tables. This is particularly the case in those areas where countries deviate from existing rules; it is therefore likely that a tabular format will always be incomplete in terms of categories. In addition, some of the information related to specific targets types outlined above (e.g. information relevant for emission reductions against a BAU scenario) does not fit very well into a tabular format when more detailed background information would be necessary for transparency.

Past experiences related to up-front information may also be drawn from the discussions about a template for NAMAs that is used to include such explanatory information in the NAMA registry. However, the clarification process did not add much detail as the template includes only a generic field for the description of the NAMA.

## 4. Position of UNFCCC Parties

Some Parties have elaborated detailed proposals on their views related to up-front information while others have not tackled the issue at all in their submissions to the UNFCCC. For a number of developing countries the concept is irrelevant, as they demand Annex I Parties to come up with quantified emission limitation and reduction objectives that are transparent and quantifiable, while non-Annex I Parties shall propose contributions for nationally appropriate mitigation actions (NAMAs) which shall only be described in a general way. The most relevant positions are outlined below.

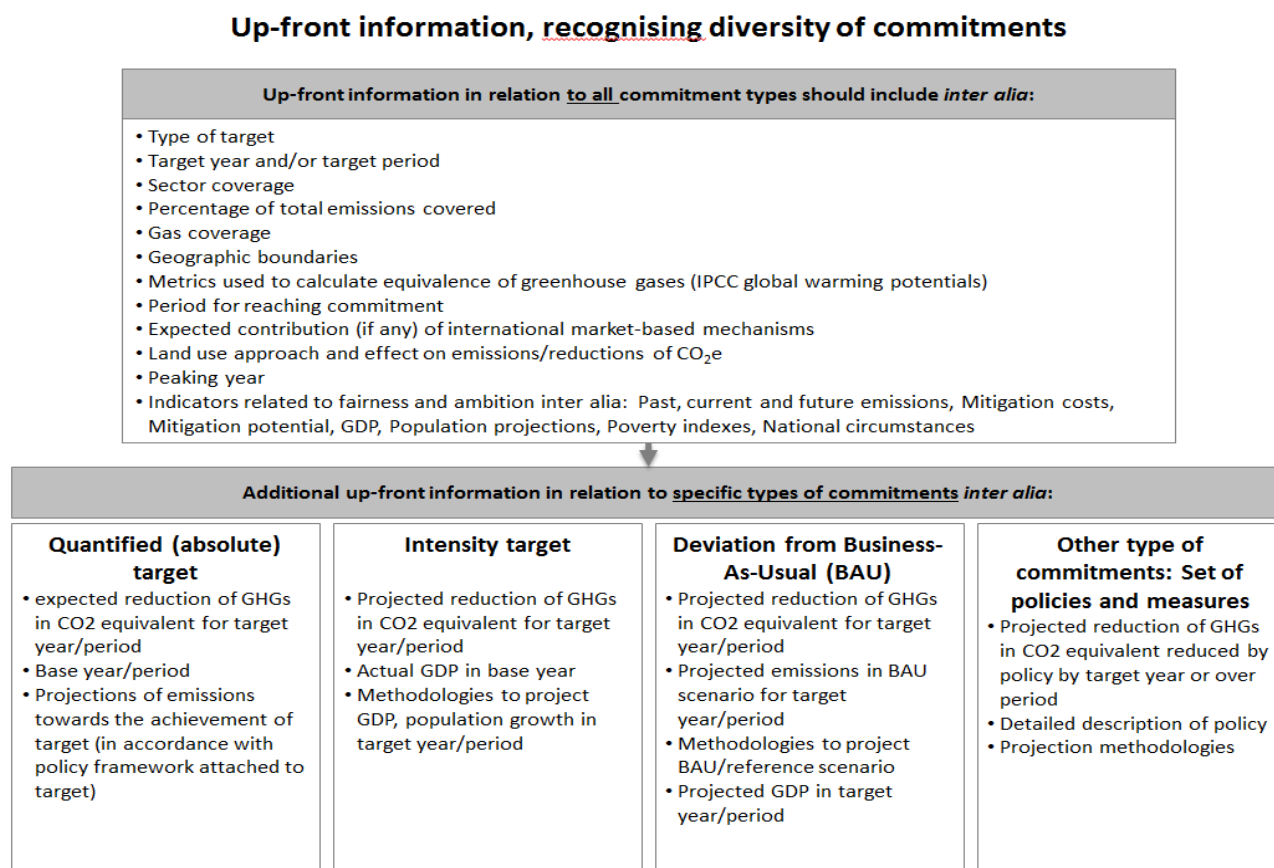
### 4.1. EU

The EU particularly highlights the five principles of transparency, quantifiability, comparability, verifiability and ambition as the objectives which up-front information should fulfil. Furthermore, according to the EU, the presentation of clear up-front information together with proposed mitigation commitments<sup>6</sup> is a precondition to an effective assessment phase of the targets. The EU proposes such assessment phase after the commitments have been proposed.

In their ADP submission made in February 2014, the EU summarises their proposal on up-front information in the following figure:

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<sup>6</sup> The EU as well as a number of other Parties refer to "commitments" in their submissions while it was agreed at the ADP negotiations at COP 19 in 2013 to use the term "nationally determined contributions" when referring to the targets which Parties will set themselves under the post-2020 agreement. For that reason, we use the term "contributions" in this paper unless we cite Parties' submissions with the understanding that these "nationally determined contributions" will become "commitments" after they have been inscribed in the new agreement.

**Figure 1: EU position on up-front information, recognising diversity of commitments**


Source: (EU, 2014)

## 4.2. USA

In their recent submission to the ADP (February 2014), the USA highlight their support for full flexibility for countries to set their nationally determined commitments in order to ensure that each Party is constructing a commitment that reflects its national circumstances and full capabilities. Thus, no limit should exist in terms of the type of contributions countries might come up with in order to encourage ambition and broad participation.

These contributions should be submitted by Parties together with clarifying information. As set out in the submission, “[t]he amount of clarifying information that should be provided should strike the appropriate balance between the need for others to understand what is being put forward and the need to avoid imposing onerous burdens on parties, particularly those with less capability”. Concretely, this information should comprise the following elements of which not all will apply to each Party’s contributions:

- The base year/period;
- The gases and sectors covered;
- The percentage of total national emissions covered;
- The overall emission reductions anticipated/anticipated as well as the overall national emission level in the target year (Parties would not be committing to this estimate but it

would only serve as accompanying information to fully understand the expected impact of the commitment);

- The approach to the land sector if included in the commitment (to the extent that the Party will make any adjustments for the purposes of their commitment that will not show up in their GHG inventory, for example, defining “national disturbances” if these are not counted towards a Party’s commitment);
- Any use/types of offsets and/or emissions trading (whether it is planned to use international units to fulfil a commitment as well as an approach to avoid double counting); and
- Any methodologies/assumptions relating to the commitment.

In their submission, the USA propose a tabular format for the provision of this information as well as the description of the commitment, a list of relevant domestic laws and regulations and major assumptions/methodologies needed for any commitment not expressed in absolute emission terms. The explanatory notes of the individual up-front information requirements remain vague though. Furthermore, the submission does not differentiate between different contribution types in terms of (additional) information that should be provided (USA, 2014).

### 4.3. New Zealand

In their most recent submission made in March 2014, New Zealand also suggests using a common template for submitting and recording contributions. This template is meant to be applicable to a “wide variety of contribution types”. According to New Zealand’s view, the specific details necessary for understanding a country’s proposed contribution include:

- Type of contribution (for example, absolute reduction target (economy-wide or sectoral), intensity target (economy-wide or sectoral) or a mix of target types);
- Expected emission reductions (expressed in absolute terms relative to a specified benchmark);
- Time period over which the contribution will be achieved;
- Base year, baseline or base period, as applicable, or methodologies to support the proposed target type, for example in calculating reductions relative to business-as-usual emission levels or emissions intensity targets;
- Sectors covered if the contribution is not economy-wide;
- Gases covered;
- Intention to participate in international carbon markets – as a buyer or seller, and the type of units that will be used and approach to be taken to avoid double-counting;
- Intention to account for net changes in emissions and removals from direct human-induced land use change and forestry activities;
- Assumptions and conditions associated with accounting for progress against the contribution, for example, land sector activity definitions and reporting and accounting methodologies to be applied; and
- Policies and measures to be applied, if the nationally determined contribution includes programme-specific components (e.g. research and development).



Additionally, New Zealand proposes the concept of “bounded flexibility”; describing an arrangement where common accounting rules are set but Parties are able to ‘opt-in’ to certain of these rules where they see the benefit to do so and ‘opt-out’ from other rules if a country determines it is not in a position to follow those rules. For example, a country could opt-out from specific gases or sectors or opt-in to agreed rules that need to be applied if international carbon markets are used for compliance with targets or if the land sector is included. In these cases, the up-front information would need to include information on where a Party departs from agreed rules from mitigation/reporting/accounting, an explanation of why it is necessary to do so as well as an assessment of the quantitative impact of the variance and whether it is time-bound (New Zealand, 2014).

#### 4.4. Environmental Integrity Group

The Environmental Integrity Group (comprising Liechtenstein, Mexico, Monaco, the Republic of Korea, and Switzerland) call for the submission of ex ante information on countries’ mitigation targets as well. Their submission contains a list of elements to be considered, “if relevant and available”: reference, information on any parameters used for defining the reference, assumptions underlying any parameters used for defining the mitigation commitment, information on accounting in the land sector and in relation to transferable mitigation outcomes within the accounting framework and on any deviation in accounting from IPCC sectors and gases, any other relevant parameter underlying the commitment (Environmental Integrity Group, 2013).

#### 4.5. Other Parties or groups of Parties

**The Independent Association of Latin America and the Caribbean (AILAC)** voice support for the provision of ex-ante information together with the contributions to make them predictable, comparable, and understandable. This information shall provide insight into the assumptions that underpin the commitments: baseline year, timeframe, sectors and gases covered, emissions factors, methodology applied, use of markets and the treatment of reduction units (Independent Association of Latin America and the Caribbean (AILAC), 2014).

**AOSIS** (Marshall Islands) addressed in the discussions at the ADP session in March 2014 in Bonn also the need to provide up-front information in a more specific way stating that it should be tailored to proposed commitments and enable an aggregation of commitments. The Marshall Islands stressed that the preparation of up-front information should not delay the preparation and presentation of commitments and does not replace accounting rules needed for the ex-post accounting of targets. They also raised the point that developing countries may face capacity constraints and may require support as well as collaboration with other Parties.

**Australia** wants countries to be flexible in setting and defining their commitment types to accommodate national circumstances and argues for setting “some parameters for defining different types of commitments (e.g. Global Warming Potentials, gases, etc.) to aid comparability”. This shall enable a clear up-front information of what the quantified impact of commitments will be (Australia, 2013). At the ADP negotiations at COP 19 Australia as well as Canada also supported the elaboration of up-front guidance for defining contributions.

**Brazil** argues for a legal distinction of commitments between Annex I and non-Annex I Parties. Each Party should define their contribution domestically, taking into account historical responsibilities, national circumstances and capacities. The contributions shall be based on a methodology developed by the IPCC, which identifies the historical responsibility in contributing to

climate change for each Party and determines the mitigation contribution to be made by that country accordingly (Brazil, 2013). In this approach – similar to the Like-minded developing countries – there is no need to define up-front information for nationally determined contributions and Brazil did not mention this aspect in its recent ADP statements.

Similar to the view of the Like-minded developing countries, **India** maintains the division of Annex I and non-Annex I Parties in terms of the commitments they should make and calls for quantified emission limitation and reduction objectives for Annex I and NAMAs for non-Annex I Parties (India, 2013). At COP 19 India voiced support for the specification of ex-ante information for Annex I Parties.

**Japan** voices support for a procedure to make sure that all Parties “have the same international obligation to submit their commitments in a way that allows comparing, evaluating and reviewing the performance and effects of each Party’s efforts” (Japan, 2013). At the ADP session in March 2014, Japan specified that such information should include emission reduction targets, base year, coverage of gases, sectors, intention to use markets and to account for the land sector in a common and simple template (Japan, 2014).

The **Like-minded developing countries (LMDC)** as a strong negotiating group comprising non-Annex I countries do not agree with the idea of having a “spectrum of commitments” in the post-2020 agreement in general.<sup>7</sup> They demand quantified emission reduction objectives for Annex I countries and “contributions” (enhanced nationally appropriate mitigation actions, or NAMAs) for non-Annex I countries. For that reason, the concept of up-front information is obsolete for their position (Like-minded developing countries, 2013).

The **Least Developed Countries (LDCs)** state in their submission that commitments must be determined in a way that allows evaluation and verification of whether the aggregate effort is in line with the objective of the Convention but do not further specify information requirements (Least Developed Countries, 2013). At the ADP session in Bonn in March 2014, Bangladesh specifically called for a ‘common template and metrics for nationally determined contributions’ (Bangladesh 2014).

**South Africa** as well as the **African Group** call for an ex ante process by which nationally determined initial commitments by Annex I Parties are presented “in accordance with multilaterally agreed and legally binding criteria in agreed templates and following agreed rules”. This ex-ante information will be assessed for their adequacy against the required global effort and fairness by means of their proposed principle based equity reference framework. The outcome of the assessment process could encourage or compel (through a facilitative process) Parties to reconsider and adjust their targets/commitments/actions. Yet, they do not propose any specific up-front information which Parties should provide with their contributions as they propose contributions to be set through a multilaterally agreed process and on the basis of templates instead of a bottom-up process (African Group, 2013; South Africa, 2013).

## 5. Conclusion/Way forward

In order to make the various types of nationally determined contributions which Parties will propose transparent and comparable, explanatory up-front or ex-ante information will be an indispensable instrument. This paper has set out a comprehensive proposal for the elements to be included in the up-front information requirements for contributions under the 2015 climate agreement.

<sup>7</sup> Including Algeria, Argentina, Bolivia, Cuba, China, Democratic Republic of the Congo, Dominica, Ecuador, Egypt, El Salvador, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mali, Nicaragua, Pakistan, Philippines, Qatar, Saudi Arabia, Sri Lanka, Sudan, Syria and Venezuela.



The different positions of Parties presented in chapter 4 show that there is disagreement on the level of detail of the up-front information and on the elements to be included as well as on the overall provision of up-front information. Many countries emphasise the need for flexibility rather than preparing detailed lists of pre-defined information.

As part of general up-front or ex-ante information this paper proposes the following categories of information that is relevant for transparency and comparability:

1. General information to describe the mitigation contribution;
2. Additional information relevant for the contribution type chosen;
3. Approach to account for emissions and removals from forests and land use;
4. Expected use of international market-based mechanisms;
5. Background information to understand the ambition of the proposed contribution;
6. Background information related to equity and fairness;
7. Background information related to finance and support needed.

With regard to additional information relevant for the different contribution types, the quantitative information that enables the conversion of a certain type of contribution into another type would be the most important information both in terms of comparability and transparency. This information includes past and projected trends of the GHG emissions and removals as well as for relevant indexes used.

A final agreement on up-front information needs to strike a balance between the technically optimal and the politically acceptable level of detail. There is a trade-off between detail and completeness against the timely availability of nationally determined contributions. It is not expected that Parties agree on long detailed lists of information requirements as provided in sections 2.2 and 2.3 above. It is more likely that a decision addresses the main categories of ex-ante information and lists some important information elements for these categories.

Requirements for up-front information related to nationally determined contributions in a decision taken in Lima will rather be an encouragement than an obligation. It needs to be taken into account that not all Parties may be able to provide all types of information requested when such information has not been relevant in the national process that generated the contribution, due to lack of capacities or of data availability.

It is important to point out that parts of the information listed above are more difficult to prepare and politically sensitive than others. For example, information related to mitigation potentials and mitigation cost curves are not readily available for all countries. Additionally, such information is closely linked to questions of efficiency as well as fairness of sharing of mitigation efforts to reach the global 2°C target and relevant for investment decisions and economic development of countries. For that reason, it might be difficult to reach agreement on the question to what level of detail this information is to be provided. The lists above thus should rather be read as 'if such information is available and has been prepared for the determination of the national contribution, it should also be provided to the international level'.

The more detailed the required information would be, the more likely it is that Parties cannot report the requested information. One of the examples is the use of market mechanisms. In preparing their national contributions, Parties may determine whether they will use market mechanisms to achieve their targets, they may potentially also determine a threshold for such use, but it is unlikely

that Parties would specify exact quantities of types of units for a long period of 15 years up to 2030 as the use of carbon markets is related to the development of carbon prices and how these compare with costs of other measures.

It is also important that the compilation of up-front information should not result in such a burden that its compilation delays the submission of nationally determined contributions. On the other hand, the information listed above is part of the information needed anyway at national level to prepare and decide on nationally determined mitigation contributions. Therefore, it does not present an additional reporting exercise. For the background information listed above, it seems more useful if Parties published related reports on the internet and provided references to these publications. Such procedure would ensure transparency without the need for an additional time-consuming information compilation exercise. Many Parties have national provisions to conduct impact assessments or conduct stakeholder consultation processes to determine national contributions. For the purposes of such consultation processes or assessments the related information is usually accessible online anyway.

Briner and Prag (2014) have discussed the concept of “bounded flexibility” for post-2020 contributions, which means that Parties could agree on the values or ranges of values to be used for some of the dimensions of mitigation contributions, while retaining flexibility for other aspects. E.g. in such concept of bounded flexibility the same target period for all Parties could be determined or the coverage of gases and sectors in economy-wide targets. Given a large variety of different views what nationally determined contributions include, it seems difficult to reach agreement on such “bounded flexibility” already at COP 20 in Lima. If agreeable, such common elements are likely to be those that are relatively straightforward and based on the current decisions (e.g. coverage of GHG emissions, gases included, metrics). If such agreement is possible, it may be better to already agree on some key initial accounting rules (e.g. related to the coverage of gases and sectors) than to agree on specific rules for up-front information. This would provide clarity to Parties for post-2020 commitments in areas where there may be a common understanding of the future rules.

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