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Preparation of Intended Nationally Determined Contributions (INDCs) as a catalyst for national climate action (NewClimate Institute 2015)

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After Paris: What is next for Intended Nationally Determined Contributions (INDCs)? (NewClimate Institute 2015)

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Conditionality of Intended Nationally Determined Contributions (INDCs) (NewClimate Institute 2016)

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<http://mitigationpartnership.net/global-support-project-preparation-intended-nationally-determined-contributions-indcs>



Challenges and lessons learned in the preparation of Intended Nationally Determined Contributions (INDCs)

March 2016

Synthesis report by

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Summary

This document presents a synthesis of the challenges and lessons learned from the preparation process of intended nationally determined contributions (INDCs) by Parties to the UNFCCC in the run up to Paris. The challenges and lessons learned from the INDC preparation process hold great relevance for the next steps regarding the implementation and further development of countries' nationally determined contributions (NDCs), in terms of both clarity and ambition.

The **availability of high-quality data and analysis** is one of the most fundamental challenges, which is also closely linked to many other challenges. While several countries drew on existing data and analysis for the preparation of their INDCs, future processes may require careful revision and updating of this existing data and, in general, a stronger focus on the production of new and additional key data, including effective data management. To that end, Parties may invest additional time and resources to enhance the quantity and quality of useful in-country data to feed in to the process of preparing and refining their INDCs. This is of particular relevance in view of the increasing complexity of the international climate regime and to ensure a transparent, consistent and integrated implementation of the NDCs.

Type and scope of INDCs submitted was partially determined by limited technical expertise on potential mitigation options in all sectors. Although the Paris Agreement calls for all countries to move towards economy wide targets, it should be ensured that this does not happen at the cost of ambition, especially in countries where technical options remain uncertain, and where well-formulated and transparent policies and measures in specific sectors with higher data availability may be more ambitious than over-cautiously set economy-wide targets. Countries should continue to work together to increase technical expertise and knowledge of mitigation options in order to reduce uncertainty and ensure the INDC targets are implementable.

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Ambition and fairness are subjective concepts, in particular in their relation to climate action. In the absence of a commonly agreed framework on the definition of fairness and ambition, different institutions have identified key criteria and basic approaches for assessing the ambition of climate action at both, global and individual level. Parties can draw on these concepts in order to assess whether they are contributing their fair share of the aggregate level of ambition required to meet the objective of the Convention. The broad inclusion of key criteria and basic approaches in NDCs can help to build trust among Parties and make contributions more comparable and transparent.

Broader socio-economic **impact assessments** of potential mitigation options are of key importance to secure buy-in and to increase ambition of governmental and non-governmental stakeholders. In most countries, cost-benefit analyses for mitigation are conducted without giving due consideration to the underlying development benefits. Mainstreaming the assessment and consideration of development benefits in climate change policy planning should be a major focus of the international community for the implementation and ratcheting up of NDCs.

In this context a better understanding of development benefits of climate action to the wider economy helps to get a deeper **understanding of the finance and resources needed** to implement ambitious mitigation

action in particular on the potential to mobilise national resources. The lack of knowledge and information at the sectoral and national level on finance and support needs is a main barrier to enhanced commitment and more importantly the implementation of ambitious actions. Urgent activity is required to close this knowledge gap and enhance the necessary capacity at the national and sectoral level.

Much can be learned from the first round of INDCs for future cycles of NDCs, particularly for the review and enhancement of ambition through subsequent NDCs. This relates in particular to structuring the process in terms of stakeholder involvement. A clearly defined roadmap for the preparation of future contributions, supported by sufficient allocation of resources to allow for necessary technical analyses as well as consultations, helps to ensure an efficient and synchronised process. Capacities and lines of communication established through the first INDC process should be maintained and enhanced to institutionalise climate policy planning at all levels of government.

This publication is part of a series of briefing papers related to Intended Nationally Determined Contributions and the next steps for Parties' mitigation contributions.

For further details on how the challenges and lessons in this paper relate to the next steps, and for policy recommendations, refer to the following paper:

After Paris: What is next for Intended Nationally Determined Contributions (INDCs) after Paris? (NewClimate Institute 2016)

Introduction

All Parties to the United Nations Framework Convention on Climate Change (UNFCCC) were requested to submit an Intended Nationally Determined Contribution (INDC), which form a central part of the 2015 Paris Agreement. By January 2016, 160 INDC submissions had been received, representing 187 Parties and covering 95% of total global greenhouse gas emissions (CAT 2016). Analysis from the Climate Action Tracker (CAT) shows that the collective impact of the INDCs submitted, if fully implemented, leads to an increase in global temperatures of approximately 2.7°C above pre-industrial levels by the end of this century with a 50% probability (CAT 2015). While this illustrates encouraging progress, further efforts are required to hold warming firmly below 2°C as agreed internationally in Cancún in 2010, or even below 1.5°C, as has been included as a desirable target in the Paris Agreement in 2015.

The INDC preparation process represents the first time that the majority of Parties, across all regions and regardless of their economic status, have actually engaged in the preparation of a formal contribution to global efforts to combat climate change. As such, the process has been a learning curve for most countries and supporting institutions at the national and international level.

This synthesis report presents the main challenges that countries faced in the preparation process of their INDCs as well as key lessons learned that can be drawn from this process. The report is based on the research NewClimate Institute (NCI) has conducted during the INDC preparation process by collecting and analysing information through desk reviews, online surveys and inputs from government representatives, national consultants, and supporting institutions linked to the in-country INDC development processes.

Some examples are given for the thematic challenges, which are drawn from GIZ's work on INDC development with more than 30 partner countries. Together, these insights present valuable lessons with a view to the post-Paris situation in which

countries seek to complete their preparations and move on to implementation of their (I)NDCs¹.

For the identification of challenges, this synthesis report draws on two major surveys with developing country representatives, carried out by NewClimate Institute before and during the INDC preparation process (Feb/Mar 2015: 44 countries; "pre-process survey") and after the process (Nov/Dec 2015: 52 countries; "post-process survey"). So far, no survey has been conducted to collect country-specific information on challenges expected for the (I)NDC implementation process. Yet, insights derived from the preparation process along with certain Paris Agreement provisions can already shed some light on what Parties may need to prepare for in the future.

Overcoming challenges of preparation and implementation

A number of think tanks, research institutions, governments and other observers have recently engaged in an analysis of the INDC preparation process at the domestic and/or global level². There is broad agreement that the INDC preparation process was not a straightforward exercise, in particular for developing countries. Research conducted by NewClimate Institute showed that 79% of consulted developing countries experienced difficulties or delays in the INDC preparation process, of which 29% experienced major delays of several months, relative to their respective national timelines (Figure 1).

¹ (I) is bracketed to indicate the post Paris period after submission of INDCs until they turn into NDCs.

² Examples include research on behalf of the UNFCCC and UNDP (NewClimate Institute 2015), the World Resources Institute (Levin et al. 2015; WRI 2015), Ricardo Energy & Environment (Dodwell 2015), CDKN (Holdaway et al. 2015) and others.

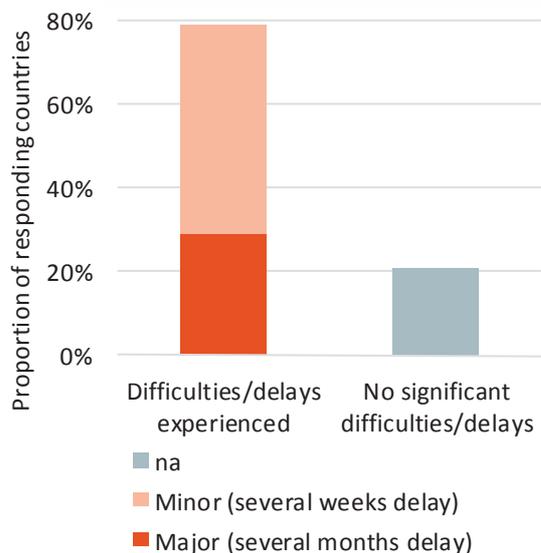


Figure 1: Challenges in INDC preparation – Extent of challenges faced

The most important challenges underlying these delays involved carrying out accurate analysis of context specific circumstances, such as, for example, precise financial and support needs for the planning and implementation of an INDC, or on potential economic impacts and co-benefits. One common cause for these challenges lies in an ongoing lack of high quality data and analysis which is a prerequisite for both the preparation and implementation of (I)NDC activities. Moreover, several

countries reported limitations with regard to the synchronisation of political and technical processes at the national level. The synchronisation of such processes is important both for preparing and submitting an INDC within a short time frame as well as for the effective revision and implementation going forward. Figure 2 summarises the main challenges reported in the post-process survey, conducted with representatives from 52 developing countries in November and December 2015.

The following sections summarise six key challenges, addressing difficulties that countries faced during their preparations for Paris, possible responses to these challenges and their relevance in the post-Paris process. This work is based on the assumption that most of these challenges will continue to be relevant in the post-2015 process. The newly adopted Paris Agreement comprises a number of elements relating to the regular review of the INDCs as well as to their implementation. In this context, countries are expected to begin preparing for a revision of their contributions with a view to increasing the current level of ambition. The agreed review cycles require Parties to revise and submit national contributions every five years, starting in

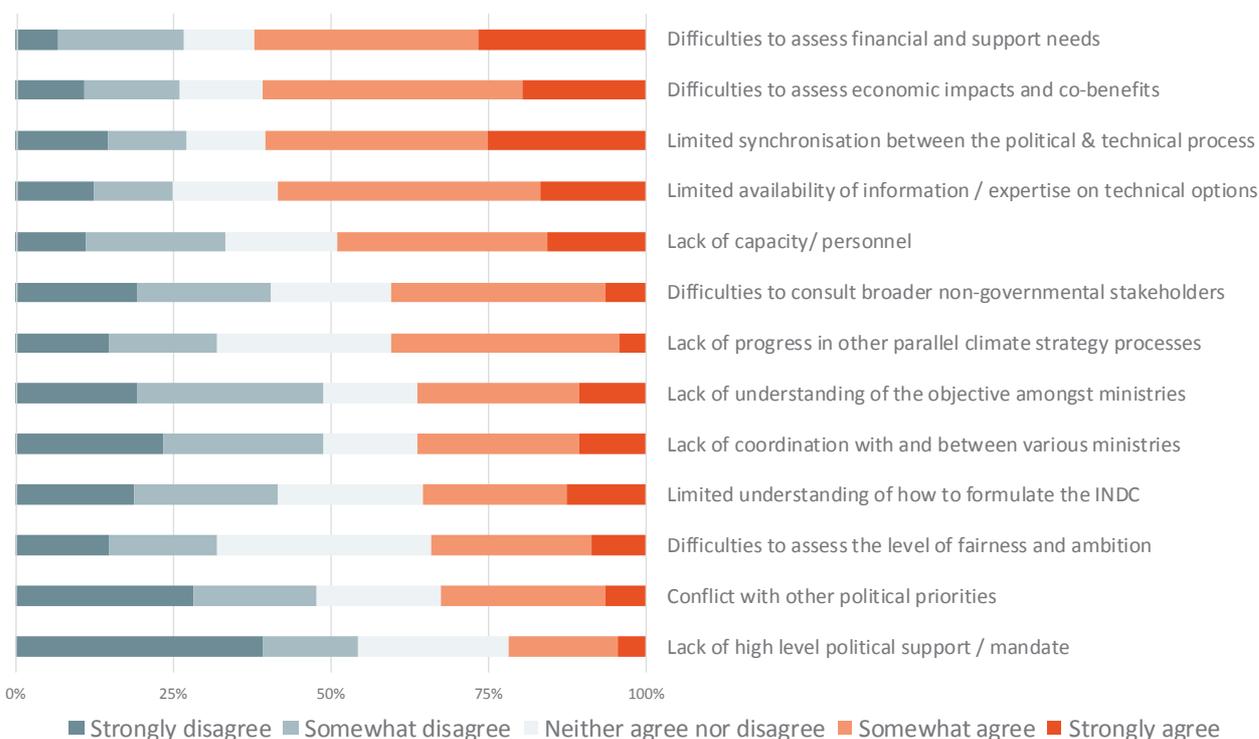


Figure 2: Overview of challenges for INDC preparation, as reported by 52 developing countries

2020 at the latest. In addition, Parties will need to develop adequate implementation plans, robust systems for monitoring and reporting as well as effective institutions in order to advance implementation.

The mapping of key challenges and lessons learned conducted in this study provides an opportunity to improve future (I)NDC processes in order to minimise time and resources on the part of participating Parties. The analysis forms part of a series of publications that complement and accentuate the knowledge further. Together, these documents offer valuable insights into key aspects that were, are and will be of major relevance to future (I)NDC related processes and activities.

Data management & analysis

One fundamental challenge that underlies several other challenges and has been reported by most Parties consulted is the limited availability of high-quality data.

High-quality data and analysis are important, firstly, to ensure that the measures prioritised for inclusion in the INDC, or the targets proposed, are realistic yet achievable, specific, ambitious, aligned with national priorities and contribute to the achievement of the Convention’s objective. Secondly, the availability of data and the capacity for analysis can also advance the understanding of several elements covered in the INDC, such as scope and type, ambition and fairness, economic impact and co-benefits, and others (Levin et al. 2015). Overall, it improves the transparency of the preparation and implementation process.

Many Parties already have relevant data and analysis at their disposal that can be used when preparing or refining the INDC. Yet, the degree of preparedness and the quality of the available data varies significantly across countries and sectors and depends to some extent on other national climate change processes such as the development of Nationally Appropriate Mitigation Actions (NAMAs) and Low Emissions Development Strategies as well as Clean Development Mechanism (CDM) projects.

For the initial preparation of INDCs, countries found it most efficient to start with a stocktake of the data that already existed at the country level. Important sources include the following:

Table 1: Potential data sources and uses for INDC preparation

Data source	Use
<ul style="list-style-type: none"> • Submissions to UNFCCC 	Provide starting point for post-2020 contribution
<ul style="list-style-type: none"> • National climate change laws, strategies and plans • Development strategies and plans • Sectoral plans 	Anchor INDC in national context (objectives and priorities)
<ul style="list-style-type: none"> • GHG inventories • National communications • Biennial Reports (BRs) and Biennial Update Reports (BURs) 	<ul style="list-style-type: none"> • Identify sectors and gases • Identify current emission reduction efforts • Understand expected future growth in emissions by sector
<ul style="list-style-type: none"> • National mitigation assessment studies • Abatement cost curves 	Assess mitigation potential (identify mitigation technologies, opportunities, policies, actions that are technically and economically feasible; identify barriers)
<ul style="list-style-type: none"> • Domestic budgetary expenditures • Current and planned investments of the public and private sector • Data on bi- and multilateral financial support provided 	<ul style="list-style-type: none"> • Estimate resource needs (technological, financial, human) • Elaborate resource mobilisation strategies

Source: Based on Levin et al. 2015.

Where specific data and analysis was not available, Parties often used proxies to fill in data gaps, referred to existing global databases (e.g. International Energy Agency (IEA), Emissions Database for Global Atmospheric Research (EDGAR) etc.) or carried out additional key analyses as basis for the INDC.

So far, only few countries have engaged in generating new key data in the INDC process and analysis has only taken place on a very limited scale. Yet, in some countries this activity has been necessary to define baselines, develop emission scenarios and projections, or for defining and meeting criteria of fairness and ambition, economic impacts and co-benefits and future finance and support needs.

Box 1: User-friendly tools for periodic data updates

In the absence of high quality data some countries developed user-friendly excel tools, based on IPCC standard methods. These tools enable to automatically update emissions calculations when activity data are adjusted related to current mitigation policies, like e.g. the national capacity of solar panels, the number of vehicles, or the area of rice cultivation. Such tools can help to address uncertainty of emission scenarios by allowing a straightforward update with newer data, as well as to support the monitoring of NDC implementation.

With regard to the newly established review process of the NDCs under the Paris Agreement, it may be necessary to produce new and additional data in the years to come to improve the informational content of the (I)NDCs and to ratchet up Parties' ambition. Thus, it may be advisable that countries start early to invest in financial and human resources to substantially enhance data procurement and analysis processes. A first step could include the establishment of a supporting network at the ministerial level that facilitates the collection of information across different political institutions. The organisational responsibility could be assigned to one coordinating ministry (e.g. the Ministry of Environment). In a further step, this supporting network could open up to include other stakeholders from the public and private sphere in order to enhance and institutionalise the information flow. Beyond data gathering activities, bilateral and multilateral programmes may be available to support the establishment of comprehensive data management systems, ensuring that the collected data can be effectively used.

The earlier and the more effectively efforts are undertaken to increase the quantity and quality of useful data to feed in to the process of preparing and refining an (I)NDC, the better prepared a Party will be for its implementation. Once a solid database and a clear systematisation strategy have been established, related processes can be considerably accelerated and improved. In this sense, investment into high quality data and analysis is, in general, of

high value for both a transparent preparation and effective implementation of countries' climate contributions. Key to this is a continuous process which can be built up over time, rather than a one-off activity.

Defining scope and type of INDC

The pre-process survey indicated that determining the scope and type of the INDC was one of the greatest challenges: 72% of the respondents reported a *lack of certainty on what to include in INDCs*, whilst the potential scope of coverage was hindered by *limited expertise for assessing mitigation options*, reported by 69% of country representatives (NewClimate Institute 2015).

Essentially, many countries at this stage were unsure about what their INDCs should look like, including the type of commitment, the sectoral coverage, the integration of both mitigation and adaptation components, the depth of detail and transparency, and the format of presentation. Following the publication of various guides and template documents by international support organisations, along with the first wave of INDC submissions, countries obtained much more clarity on the type and format of their INDCs. Later, in the post-process survey only one third of countries reported that limited understanding of how to formulate the INDC had been a significant barrier to their process.

Although an understanding of how an INDC should be formulated became clear during the process, the type and scope of INDCs appears to have been strongly affected by the limited expertise on available mitigation options across all sectors (Figure 2). Table 2, which presents the type and scope of the INDCs that were submitted by countries ahead of COP21 in December 2015, shows that although 79% of INDCs are based on a GHG emission reduction target, fewer than half of INDCs cover the entire economy. 46% of submissions identified a selection of priority sectors, or just one focus sector. Often these sectors were determined through a prioritisation exercise that considered emission reduction potential, economic impacts, and synergies with national priorities and development objectives.

Table 2: Overview of type and coverage of mitigation contributions from INDCs submitted in 2015

	% of INDCs
Type of INDC	
Including GHG emissions target	79%
Non-GHG emissions target	6%
Actions only	15%
Sectoral coverage	
Economy wide action (100%)	47%
All major sectors (>95%)	5%
Selected priority sectors	38%
One sector only	8%
Unknown	1%

The Paris Agreement (Article 4) encourages all countries to move towards economy-wide GHG emission targets for future revisions of their (I)NDCs. In order to facilitate such a development, the barriers that prevented countries from submitting economy-wide GHG targets in their INDCs for the Paris Agreement in 2015 have to be understood and overcome.

Many countries, particularly low- and middle-income countries, face barriers on two levels. Firstly, due to limited technical expertise and resources allocated to the design of climate change mitigation strategies and a lower political priority of climate mitigation in the past, there remains a gap in the technical understanding of the options for mitigation, and their costs, across all sectors. Secondly, developing countries face uncertainty with regards to their future development trajectories, the affordability of new technologies, and the availability of international support. The uncertainty of support was addressed by many countries through the attachment of conditions to their contributions³, but the remaining uncertainties are substantial. Overall, proposing economy-wide GHG-targets and thereby committing to an outcome of action is a greater risk than committing simply to the performance of the action regardless of its outcome. The better the availability of research and understanding of the impacts of specific actions the lower is the uncertainty. Carefully planned and clearly communicated policies and measures may have a greater mitiga-

³ See NewClimate Institute briefing on the conditionality of INDCs ((Day et al. 2016)

tion impact and may attract more international support than targets which are unclear and/or less efficient in their implementation. At the same time, in terms of mid-term ambitiousness and transparency, it would be best to have an economy-wide target which is then concretised in policies and action plans.

Box 2: Developing the scope of the INDC in Georgia

The government of Georgia intended to include the forestry sector in the country's INDC but was lacking data to incorporate it into the baseline scenario. Emission data was only available for one forest district. On basis of this, specific actions and targets for increased carbon sequestration were identified for this pilot area and submitted as an annex of the INDC formulated as unconditional targets for the pilot region and conditional targets for further forest districts. This shows how a country can start with what is available while at the same time improving the availability of data in order to readjust the action plans and contributions by the time better data sources are available.

(Government of Georgia 2015)

Developing countries might also be encouraged to continue to communicate proposed sets of actions as well as GHG targets, which could be expressed as indicative quantifications only, to avoid the potential loss of ambition due to the risks discussed.

Demonstrating fairness and ambition

The Lima Call for Climate Action, adopted at COP20 in December 2014, agreed that the information to be provided by Parties in their INDCs may include how each Party considers that its contribution is "fair and ambitious, in light of its national circumstances".⁴

In principle, the assessment of whether an individual contribution is fair and ambitious follows a subjective rationale. It can be determined either multilaterally, on the basis of commonly agreed criteria and indicators (allowing for a certain degree of ob-

⁴ UNFCCC/CP/2014/10/Add.1

jectivity) or individually, on the basis of what a country thinks is fair and ambitious.

Parties have mandated the UNFCCC to assess the combined ambition of INDCs and the resulting emission reductions at the global level, in order to understand whether they are sufficient to close the emissions gap. A first assessment has been conducted and published in the form of a synthesis report (UNFCCC 2015). However, Parties did not (yet) agree on a process to assess the fairness and ambition of individual INDCs, with regard to both the global climate goal and individual country circumstances.

In the absence of a globally led process, some Parties have, already in their preparations for Paris, engaged in an individual exercise to assess the ambition of their own and other INDCs. Given the subjective nature of the concepts of fairness and ambition, countries used a wide range of different criteria. Among the most widespread criteria used were development status, share of global emissions, and per capita emissions. Some countries also mentioned improvements against past developments or current trends (e.g. Australia, United States of America), while others referred to past action or their mitigation potential (e.g. Japan, South Korea). In particular Small island developing states (SIDS) mentioned vulnerability to climate change impacts as a key criterion. Finally, some countries compared their INDC directly with IPCC trajectories.

While the recently adopted Paris Agreement still does not offer a common framework for assessing fairness and ambition, it includes several provisions that invite countries to increase their ambition at least every five years (starting in 2018) and provide transparency on the progress made.⁵ It is thus likely that the discussion around fairness and ambition will remain and become increasingly important for the international process.

Box 3: Practical country experience for the determination of ambition level

In order to demystify the perceived high burden of mitigation actions in a country traditionally rather sceptic about setting itself a mitigation target, a governmental change agent followed a step by step approach consisting of collecting data including first evidence of mitigation actions and the assessment of co-benefits and close stakeholder involvement. This step by step approach convinced stakeholders in the sectors and as a whole led to a more proactive stand towards mitigation actions in the INDC.

In an effort to contribute to this debate and offer a more objective approach, a number of initiatives and organisations undertook research that can provide valuable insights with regard to the combined and individual levels of ambition of (I)NDCs. For example, the IPCC Fourth and Fifth Assessment Reports include suggestions on how to share mitigation efforts across countries (IPCC 2007; IPCC 2014). The UNEP Emissions Gap Report, on the other hand, tracks the aggregate effect of (I)NDCs on global emissions and analyses the emission levels resulting from individual trajectories (UNEP 2015). Apart from these periodic reports there are several relevant initiatives, such as the Climate Action Tracker⁶ (CAT) which provide estimates of emission levels resulting from individual and aggregate (I)NDCs and indicate whether a contribution is in line with effort sharing principles. Also the Greenhouse Development Rights Equity Calculator⁷ suggests a potential fair emissions level for all countries using one effort sharing approach, which relies on the idea that only Parties above a certain threshold of per capita GDP should participate in the regime.

Several of these initiatives base their argumentation on effort sharing approaches that compare countries' contributions to a "fair share". These approaches differ with regard to a) the focus on certain dimensions of effort sharing, such as historic responsibility, equality, capability or costs; and b) assumptions and initial judgements on how to

⁵ UNFCCC/CP/2015/L.9/Rev.1

⁶ www.climateactiontracker.org

⁷ www.calculator.climateequityreference.org

weigh certain aspects (e.g. which indicators to use for the illustration of global emission pathways). Different effort sharing models can complement each other, provided that the underlying assumptions are made transparent (Ancygier et al. 2015).

Although widely debated, effort sharing approaches are not the only way to assess the fairness and ambition of individual (I)NDCs. There are several other methodologies that countries can draw on. Some may be applied in a complementary manner in order to reflect the diversity of countries in terms of their different development status, industrial structure, capabilities and responsibilities. Fekete et al. (Fekete et al. 2015) propose five principal approaches (including effort sharing) that offer a wide range of different parameters for a country to base its fairness and ambition argumentation on. In line with these five approaches, countries can illustrate their ambition level and to which extent this is 'fair' by a comparison to 1) business-as-usual (either a historic trend or a projection in the future); 2) effort sharing approaches; 3) assessed mitigation potential; 4) decarbonisation indicators or benchmarks; or 5) a good practice policy package or a policy menu. For an ambitious contribution, a country can opt for a target that goes beyond its fair contribution. In the end, a fair and ambitious contribution may reflect two dimensions: what a country **should** do, given its responsibility and capability, and what it **could** do, given its national circumstances.

In order to support individual countries in this move, an important task of the international community lies in further encouraging advanced in-country research to enlarge and improve domestic data bases, facilitating the broad inclusion of key metrics and other factors that can make contributions more transparent and comparable. Furthermore, enhanced policy dialogue at different levels may help to identify key criteria for a more objective assessment of fairness and ambition and foster understanding between countries. This may also advance general credibility of (I)NDCs. A commonly agreed framework on fairness and ambition under the UNFCCC is unlikely to be agreed on in the near term due to the differences in national circumstances and issues of subjectivity of the concept.

Understanding economic impact and co-benefits

The post-process INDC survey found that difficulties to assess the economic impacts and co-benefits of mitigation action was one of the largest challenges in the preparation of their INDCs: approximately two thirds of countries consulted found this to be a significant issue.

A robust understanding of the positive and negative economic impacts of proposed mitigation actions is of key importance to the preparation and implementation of international climate change mitigation contributions:

- At the technical level, impact assessments assist to identify the most attractive mitigation options. Ambition can be enhanced through the identification of mitigation options that may not have been considered as priorities, but which carry zero or negative costs when economy-wide impacts are considered.
- The participation of governmental and non-governmental stakeholders can be enhanced through an increased appreciation of the co-benefits of mitigation actions within their sectors. Many countries continue to experience challenges with inter-ministerial cooperation, which ultimately reduces the sectoral scope and potential ambition of some contributions.
- Comprehensive and widespread understanding of the co-benefits of specific low carbon development strategies can support political processes. Greater understanding of co benefits may increase the depth of engagement of high-level political stakeholders.
- Co-benefits are of major importance to mitigation policy at the subnational level where policy making, informed by positive impact assessments, can help national governments to exceed their targets and increase their own ambition.

The evidence from consultations with national governmental and non-governmental stakeholders indicates that the majority of countries traditionally do not consider a comprehensive analysis of the co-benefits when planning for climate change mitigation, including for the preparation of INDCs (Day et al. 2015). However, some countries were notable in their consideration of co-benefits for INDC development. The Dominican Republic conducted a thorough assessment of the co-benefits for job creation and cost savings of various mitigation measures in all important sectors, informing a sector prioritisation exercise for the country's INDC (Alvarez 2015). The EU published a comprehensive impact assessment of potential mitigation scenarios, which included economic impacts such as job creation (European Commission 2014). Armenia used co-benefits heavily in its public dialogue on climate change mitigation for the INDC preparation, to increase awareness and support from the public (NewClimate Institute 2015).

As countries move into the next phase of refining, re-submitting and implementing their (I)NDCs, great emphasis should be placed on the execution and due consideration of co-benefit and impact assessments. Such analysis is important to improve the understanding of the wider development benefits of mitigation activities and thus increase the buy-in of key stakeholder to increased mitigation ambition. A detailed assessment of co-benefits also helps to mobilise national resources for implementation and to articulate international financial support needs. Knowledge sharing between countries and the provision of technical assistance where necessary can help countries to adopt and mainstream efficient processes for impact assessments, and to communicate the results to a wider group of governmental and non-governmental stakeholders. The international community can assist with the continued development of toolkits for impact assessments, and databases to document case studies of such assessments for measures at the national and subnational level around the world.

Articulating finance and support needs

A key challenge faced by countries is the identification of finance and support needs in the context of the INDC. The identification of resources needed to successfully implement the INDC is relevant both for national planning purposes as well as the articulation of international support needs. It was identified as the most important challenge by approximately two thirds of respondents to the survey (see Figure 2).

The Paris Agreement reiterates the joint finance goal of providing USD 100 bn annually by 2020. In order to realise countries' full mitigation potential and ensure maximum effectiveness of international climate finance, countries will need to work out detailed resource and investment plans that help understand their specific support requirements.

Many INDC submissions include a statement on finance and support needs as part of the conditional contributions where increased mitigation ambition is made contingent on the provision of support such as finance, technology or capacity building. Here, some countries provide concrete, quantified estimates of the level of investment required, whilst others include broad statements on support required to implement more ambitious mitigation activities. Where estimates are provided these either apply to the INDC as a whole or, in some cases, to individual actions proposed under the INDC. Morocco's estimates for instance are based on its Green Investment Plan for mobilizing climate finance.

In most cases, however, little information is provided on the details and assumptions behind the numbers, the financial delivery mechanisms or the sources. Some countries recognise the need to develop detailed analysis to clearly understand the financial implications of the INDC and increased ambition. For example, Chile announced in its INDC plans to issue a National Finance Strategy for climate change in 2018 detailing national and international resource requirements reflecting both private and public sources (Government of Chile 2015).

Box 4: Successful approaches for development of finance plans alongside contributions

In some cases, it was possible to combine the process of INDC formulation with climate finance readiness activities and the development of a roadmap on how to coordinate within the country to approach funds such as the GCF. A benefit was – next to the important prioritization of mitigation actions as candidates for international funding – the improved coordination among stakeholders related to finance and international support and those coordinating the INDC process.

Whilst the post-process survey showed an increase in countries' understanding of their finance needs – 63% reported that they understand financial needs after going through the INDC preparation process versus 35% before this process – there clearly remains a knowledge and information gap on the financial implications of (enhanced) mitigation commitment at the national and sectoral levels. A clear understanding of the resource implications of mitigation activity is important to identify the potential for increased ambition, to build political consensus for its implementation and to mobilise national resources. It is also important in the context of accessing support mechanisms under the international framework, including, for example, the Green Climate Fund (GCF).

Whilst top down assessments of investment needs can give an indication of resource requirements on a broad scale, a bottom up analysis is most appropriate to fully understand costs, benefits and potential trade-offs across different sectors and the economy as a whole. This kind of assessment requires defining concrete plans and delivery mechanisms for the (I)NDC and the costing of each. On the basis of overall investment and resource requirements, the mobilisation of national resources (both public and private) can be considered and the associated enabling framework to activate investment especially from private sources can be created. Such an exercise at the national level helps, on the one hand, to add detail to and increase transparency of the unconditional component of a country's INDC. On the other hand, this will provide clarity on the

level and type of financial or other support needed from the international community to implement INDCs and to increase the level of ambition, as expressed, for example, in the conditions associated with some countries' contributions.

Synchronisation of technical and political processes

The successful finalisation of the INDC required a coordinated technical and political process. On the technical side the details of the commitments needed to be assessed and elaborated. At the same time the final INDC had to be signed off politically. According to the post-process survey, for most countries the sign off was at the ministerial or cabinet level, for some it even involved the parliament and heads of state. Interestingly, the pre-process survey indicated that countries had expected to get the INDC signed off by parliament or the head of state which in the end often resulted in ministerial level sign off. This may have been the result of a poorly synchronised technical and political process as well as the fact that no or few new policies were included in the INDC. In any case, for many countries it was the first time that a national climate policy process actually required the involvement at a high or the highest political level.

65% of countries that participated in the post-process survey (Figure 2) reported that the synchronisation of the two processes presented a challenge. In many cases the INDC process started as a technical exercise, and the political requirements were underestimated or only considered at a later stage. The INDC experience of Morocco, for example, recognises the need to mobilise high level political decision makers right at the start in any future NDC cycles to improve the efficiency of the process (Kurdziel & Roeser 2015).

The technical process was mostly able to build on existing structures and processes. In many cases it involved stakeholders at the technical level of different government entities that were relatively familiar with climate related aspects, for example through their involvement in Low emission development strategies (LEDS), Nationally Appropriate

Mitigation Actions (NAMAs), Technology Needs Assessments (TNAs) or other climate planning activities. In addition, many countries benefitted from technical support provided by bilateral and multi-lateral donors and agencies. The political process on the other hand, was in many cases relatively new territory. Only a limited number of countries have established institutional structures for climate change mitigation policy planning at the political level that reach beyond the ministry level. The involvement of high level political stakeholders hence often required new processes and lines of communication (e.g. through specific committees or coordinating bodies) to be set up. Also many high level political decision makers lack the technical knowledge on climate change, which demands a translation of technical information and data into succinct political documents. At the same time these need to reflect climate priorities within the wider political context to account for the balancing of potentially competing political agendas.

The successful management of the individual processes presented challenges in themselves, let alone managing both in a synchronised way under significant time constraints as the INDCs process required. In addition, time constraints of high level decision makers and formalities of convening meetings posed additional challenges. Future review cycles can benefit from the experiences and lessons learned in this first round of developing and presenting INDCs. They can build on institutional processes and capacities that were established during this first INDC preparation phase. In addition, a clear roadmap including key steps and milestones for the technical and political processes and their interactions can support the efficient management of a synchronised approach. Such roadmap should be underpinned by a resource plan including definition of roles, responsibilities, mandates, budgets and timelines.

Box 4: Morocco's successful approach for synchronisation of technical and political processes

Morocco deployed independent experts for the validation of the technical assumptions and information surrounding the mitigation actions in the sectors. That way, political decision makers gained more confidence in the reliability of data and assumptions. The involvement of such decision makers from various ministries at a very early stage of the process led to an increased ownership and improved the access to data from the sectors. In addition, political backing could be strengthened through high level and international conferences on the INDC process. Through the participation of INDC decision makers and coordinators, more exposure to international processes was enabled and the relevance of the INDC process in this arena could be demonstrated.

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