Submission to the UNFCCC ahead of the first Technical Dialogue of the Global Stocktake

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Executive Summary

This submission is made on behalf of the Institute for Sustainable Development and International Relations (IDDRI). IDDRI is an independent policy research institute and a multi-stakeholder dialogue platform who identifies the conditions and proposes tools to put sustainable development at the heart of international relations and public and private policies.

Submissions are also on behalf of the Deep Decarbonisation Pathways Initiative (DDP). The DDP initiative is a collaboration of 36 in-country research teams, based in recognised and independent institutions. It aims to help governments identifying pathways to deep decarbonisation.

Objective

This submission presents a series of idea and frameworks developed by IDDRI and its partners to be considered by Parties in the first Technical Dialogue (TD) of the Global Stocktake. We intend to supplement this submission with more specific data and recommendations for TD2, depending on the needs articulated as an outcome of TD1.

Summary of Inputs

1. **Adaptation Tracking**

It is necessary to establish a reference point for global adaptation. To be relevant, such an assessment needs to be scientifically independent but policy relevant. And this should be both global and national: The Global Goal on Adaptation should be better defined through the identification of more specific goals at the global level. Moreover, a framework needs to be designed to guide countries to improve their treatment of adaptation, and using guidelines that are consistent across countries in order to support shared analyses (e.g. by UNFCCC) for Global Stocktake(s). IDDRI developed a first tool to this end, the Global Adaptation Progress Tracker (GAP-Track).

2. **Ocean and Climate**

Besides being impacted by climate change, the ocean (including coasts) offers opportunities to reduce the causes and consequences of climate change, globally and locally. However, countries have poorly used ocean-based measures for tackling climate change and its impacts, for example in their NDCs. It is critical for the international climate negotiations to move from a basket of potential ocean-based solutions to a policy clustering of the potential ocean-based solutions. In this view,

IDDRI contributed to develop such a policy clustering for a range of ocean-based solutions for both climate mitigation and climate adaptation, and from the global to the local scale.

3. **Climate Ambition Beyond Emission Numbers**

Assessments made under the GST on the state of progress on greenhouse gas emission trends and targets, as well as the efforts made towards adaptation or meeting the financial commitments will be very important. However, such gap analysis will not be enough to accelerate climate ambition and action. For that, the GST should also focus on identifying what hinders and spurs action, understanding the conditions that make them happen, which could be i.e. political, social, economic, governance. A more granular and context-specific analysis of trends and progress of national and sectoral transformations will help identify the conditions for accelerating ambition. IDDRI coordinated a report with 40 experts, to assess the evolution of climate ambition in 26 countries and 3 hard-to-abate sectors, that provides an example of the type of cross-cutting information that should be considered to jointly assess the adequacy and the credibility of national contributions and their global aggregation. It also prepares the terms of the dialogue on what is needed to unlock or accelerate transformation, in particular, what necessitates more international cooperation.

4. **Policy Lessons on Deep Decarbonisation in Emerging Economies**

The gap between existing evidence and concrete action highlights that the carbon neutral transition is not only a matter of techno-economic feasibility, but essentially a question of political economy and policy implementation. The DDP network presents a report for India, Indonesia, Brazil and South Africa that intends to bring clarity about the choices to be made in the transition, about the concrete policies and actions that can be envisaged, about those who can be winners and those who may lose, and the measures adopted to manage the socio-economic costs of the transition. Bottom-up granular policy lessons are essential input to assess the adequateness of the progress achieved and necessary action to keep the global long-term goals of the Paris Agreement within reach.

5. **A country-driven perspective on long-term low-emission development strategies (LT-LEDS)**

The transformations and actions needed to achieve the Paris Agreement's global goal require a strengthening of international cooperation, which is in turn one of the key objectives of the Global Stocktake. To be consistent with the Paris Agreement's bottom-up paradigm, it is essential that global cooperation priorities identify the critical enablers needed to accelerate the transformation to low-carbon and resilient economies. The LT-LEDS exercise can play an instrumental role in identifying these international enablers and understanding the main barriers to neutrality. It can therefore help focus the Global Stocktake discussions on elements that really matter

for individual countries, help identify the key issues to be tackled collectively, and help build consensus on the best global and national responses. As such, LT-LEDS can be a critical input to ensure that international cooperation is framed around countries' needs for implementing their transformation to a carbon neutral and resilient economy.

Inputs to the Global Stocktake: Index

1. Adaptation tracking

A recent study (https://www.nature.com/articles/s41558-021-01156-w) translated qualitative IPCC risk assessments from the 2018 and 2019 Special Reports into risk scores that, when aggregated, describe **global risk from climate change**. The study shows that by the end of this century, global climate risk will increase substantially with GHG emissions compared to today (composite risk score multiplying by 2 and 4 under RCP2.6 and RCP8.5, respectively). Comparison of risk levels under +1.5 °C and +2 °C suggests that every additional 0.5 °C of global warming will contribute to higher risk globally (by about +30%). **Societal adaptation** has the potential to decrease global climate risk substantially (by about half) under all RCPs, but cannot fully prevent residual risks from increasing (by +30% under RCP2.6 and x2 under RCP8.5, compared to today).

In such a context, and in response to the political call at COP26 Glasgow (in the perspective of the GST in 2023), it is critical to answer the question: are we on track to adaptation globally? Given the known limitations of the current definition of the Global Goal on Adaptation (GGA; e.g. not precise enough to help setting a clear objectives and pathways), addressing this question calls for **several landmark advances to be initiated under the Glasgow-Sharm-El-Sheik Working program** on the GGA:

- **Establish a reference point** for global adaptation, and move beyond the purely qualitative “enhancing adaptive capacity, strengthening resilience and reducing vulnerability” narrative. That is, which concrete destination? To be relevant, such an assessment needs to be scientifically independent but policy relevant, hence calling for a development by an internationally-recognized scientific organisation/institution that is policy-independent and policy-relevant, but not policy-prescriptive.

- This should be done through an **independent assessment** (not through UNFCCC process)

- **Better define the GGA** through the identification of more specific goals at the global level, for example for socio-geographical archetypes representing key human settlements across countries (urban, coastal, rural, Arctic, etc.) and/or key sectors acknowledged as having a critical influence on well-being under a changing climate (e.g., health, food security, etc.)

- Design a **framework to guide countries to improve their treatment of adaptation** (in NDCs for example), and using guidelines that are consistent across countries in order to support shared analyses (e.g. by UNFCCC) for Global Stocktake(s).

Ideas are scarce on how to evaluate progress towards the Global Goal on Adaptation (GGA) and more specifically, how to inform the GST in 2023. IDDRI developed a first tool to this end, the **Global Adaptation Progress Tracker (GAP-Track)**:

- Blog post 2021 "*Enhancing adaptation tracking at the global level*" (https://www.iddri.org/en/publications-and-events/blog-post/enhancing-climate-adaptation-tracking-global-level)

- Methodological report (https://www.iddri.org/sites/default/files/PDF/Projets/GAP-Track_Methodological%20report%20(D1)_September%202021.pdf)

- Pilot Study Report (https://www.iddri.org/en/publications-and-events/report/global-adaptation-progress-tracker-gap-track-pilot-study-report-2021)

2. Ocean and Climate

A recent study (https://www.nature.com/articles/s41558-021-01156-w) translated qualitative IPCC risk assessments from the 2018 and 2019 Special Reports into risk scores that, when aggregated, describe **global risk from climate change**. The study shows that by the end of this century, global climate risk will increase substantially with GHG emissions compared to today (composite risk score multiplying by 2 and 4 under RCP2.6 and RCP8.5, respectively). Comparison of risk levels under +1.5 °C and +2 °C suggests that every additional 0.5 °C of global warming will contribute to higher risk globally (by about +30%). **Societal adaptation** has the potential to decrease global climate risk substantially (by about half) under all RCPs, but cannot fully prevent residual risks from increasing (by +30% under RCP2.6 and x2 under RCP8.5, compared to today). A first comparison among Ocean, Coast and Land environments suggests a potential higher sensitivity to anthropogenic climate change of the **Ocean risks** (species and related human activities such as fisheries) compared with the Coast and Land risks, especially when moving from RCP2.6 to RCP8.5—Ocean risk index amplification is double that of Coast and Land.

Besides being impacted by climate change, the ocean (including coasts) offers opportunities to reduce the causes and consequences of climate change, globally and locally. However, countries have poorly used ocean-based measures for tackling climate change and its impacts, for example in their NDCs. One reason is that while a wide range of so-called solutions are on the table to enhance mitigation as well as adaptation, they are presented separately from each other, which doesn't help decision-makers to understand which ones are potentially decisive, low regret or not full ready yet.

In such a context, it is critical for the international climate negotiations to **move from a basket of potential ocean-based solutions to a policy clustering of the potential ocean-based solutions**. In this view, IDDRI contributed to develop such a policy clustering for a range of ocean-based solutions for both climate mitigation and climate adaptation, and from the global to the local scale. The results are presented in Figures 1 and 2 below and in two Policy Briefs:

- *Opportunities for increasing ocean action in climate strategies* (issued in 2019): (https://www.iddri.org/sites/default/files/PDF/Publications/Catalogue%20Iddri/Propositions/201911- PB0219-ocean%20NDCs_0.pdf)

- *The potential for ocean-based climate action: Negative Emissions Technologies and beyond* (issued in 2021): https://www.frontiersin.org/articles/10.3389/fclim.2020.575716/full

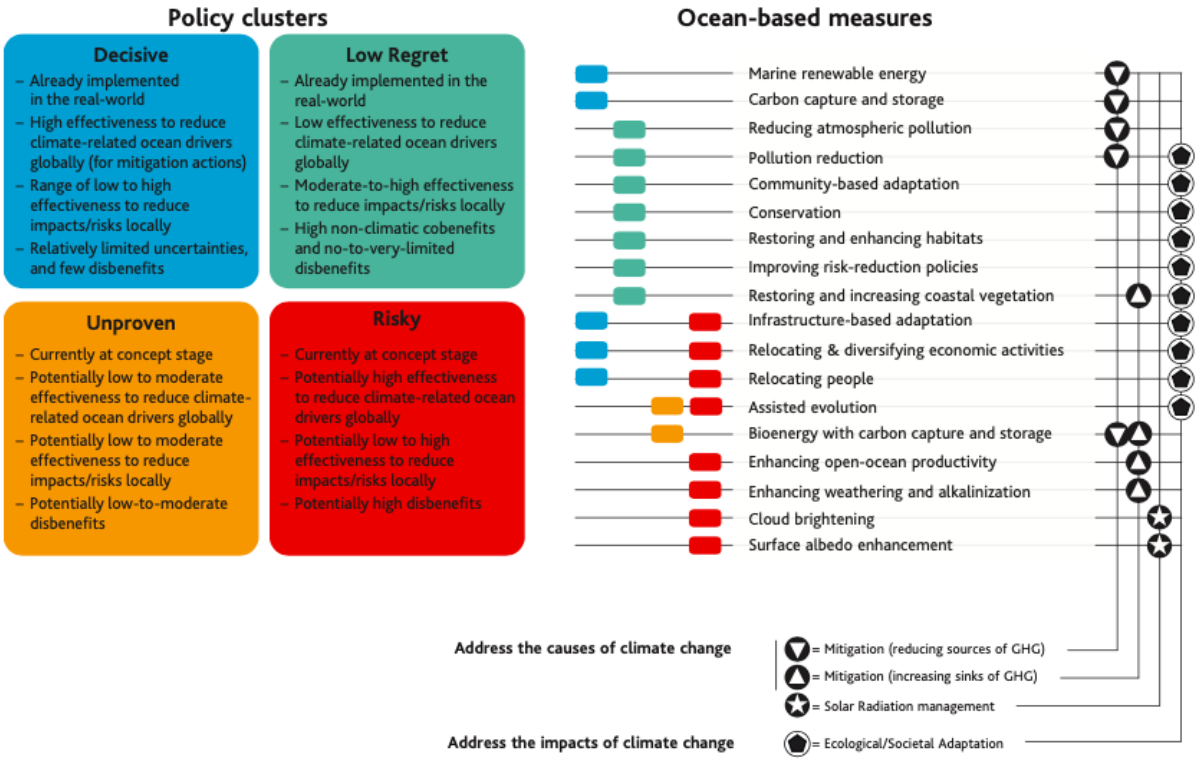

Figure 1. Policy clusters of ocean-based climate action. Source: Gattuso et al. (2019)

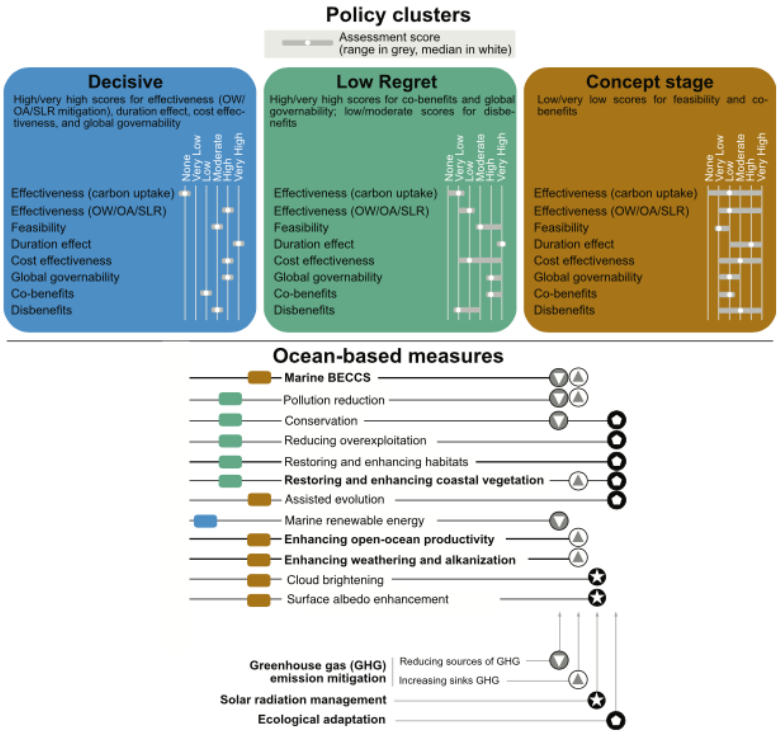

Figure 2. Policy clusters of ocean-based Negative Emissions Technologies. Source: Gattuso et al. (2021)

3. Climate Ambition Beyond Emission Numbers

Assessments made under the GST on the state of progress on greenhouse gas emission trends and targets, as well as the efforts made towards adaptation or meeting the financial commitments will be very important. They will provide convincing evidence to accelerate action in the immediate and short term, including the revision of NDCs, and provide robust and accurate information that the climate community and civil society public can use to mobilize and exert pressure.

However, such gap analysis will not be enough to accelerate climate ambition and action. For that, the **GST should also focus on identifying what hinders and spurs action, understanding the conditions that make them happen, which could be i.e. political, social, economic, governance.** A more **granular and context-specific analysis of trends and progress of national and sectoral transformations will help identify the conditions for accelerating ambition.**

Earlier this year, IDDRI coordinated a report with 40 experts, to assess the evolution of climate ambition in 26 countries and 3 hard-to-abate sectors. Its purpose is to take an approach similar to what has been highlighted above, thus offering a complementary perspective to climate ambition.

Considering climate ambition through the lens of underlying transformations forces a move away from a purely global perspective and relies on the adoption of a more granular approach based on country and individual sector perspectives. Thus, the report explores trends and progress on these transformations, as locally observed over the past years, notably since the Paris Agreement. The underlying rationale is that a good understanding and assessment of the past and current situation will inform the maturity of climate policy and its strengths and weaknesses. This 'backwards looking' approach can help identify where developments are going in the right direction, where they should be accelerated and where major tensions remain that should be addressed as a priority to avoid undermining the transition.

The report identifies country-by-country and sector-by-sector key international enablers, and highlights cross-cutting messages emerging from these perspectives to identify the critical enablers emerging from this composite picture, such as the need for international cooperation. It is also an illustration of an implemented cross-cutting, bottom-up assessment of collective progress and projected ambition, that could serve as inspiration to the GST. As such, it provides an example of the type of cross-cutting information that should be considered to jointly assess the adequacy and the credibility of national contributions and their global aggregation. It also prepares the terms of the dialogue on what is needed to unlock or accelerate transformation, in particular, what necessitates more international cooperation.

These insights are directly relevant to four overarching functions of the Global Stocktake in support of its desired outcome, i.e. “to inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the provisions of the Paris Agreement, as well as enhancing international cooperation for climate action” (Article 14.3 of the Paris Agreement):

- **Create the conditions for an open and constructive conversation on global cooperation** (on e.g., technology, trade, finance, etc.), based on an in-depth understanding of the international enablers of enhanced country ambition.
- **Organize a process for knowledge sharing and collective learning**, based on concrete examples of actions already in place or being discussed, including best practices.
- **Create space for open dialogues across different stakeholders** to support better coordination of actions, based on a detailed understanding of the levers to be activated to enhance ambition in national and sectoral transitions
- **Facilitate ownership by decision-makers of the climate challenge** and the risks and opportunities of the low-emission and resilient transition, based on context-specific and granular analysis of barriers and enablers.

The report and some blogs providing context can be found here:

- Report: Waisman et al. (2021) Climate Ambition Beyond Emissions Numbers
- Full report and separated country and sectoral chapters can be found here: https://ddpinitiative.org/
- Blog post: Assessing climate ambition: getting the full picture beyond emission numbers (September 2021)
- Blog post: Mitigation ambition in motion: how closer to the 1.5°C goal after COP26? (November 2021)
- Blog post: From COP26 to the Global Stocktake (November 2021)

4. Policy Lessons on Deep Decarbonisation in Emerging Economies

The world has agreed to prevent the irreversible damages to human and natural ecosystems caused by anthropogenic global warming by limiting the rise of global temperature to well below 2°C and to pursue efforts to limit it to 1.5°C. To implement this, the Paris Agreement grounds this goal in terms of global emission trajectories and the need to embed them in the context of sustainable development and efforts to eradicate poverty. Subsequently, science (IPCC SR1.5) further specifies that global neutrality concerning carbon dioxide specifically should happen between 2050 (for 1.5°C) and 2075 (for 2°C). It also points out the necessity of minding non-CO2 forcers to maintain the global objective. **To reach this scale of emission reductions, the scientific assessment concludes that rapid and far-reaching transformations, far beyond what has been observed in the past, are required in all components of the economic system**, i.e. in energy, urban and infrastructure, industry and land and ecosystems. Such drastic transitions in turn require profound changes in technologies but also in social, economic, institutional and policy conditions. **Science shows that the changes required by climate objectives can be compatible with broader sustainable development objectives if action is implemented without delay, is guided by strategic visions of transformations informing the design of well-designed policy packages and the cooperation among actors and is enabled by effective international cooperation.** With these framework conditions at hand, countries are set to explore national pathways to explain how the rapid and far-reaching transitions required globally can happen in each country context.

National deep decarbonisation of large emerging economies has been largely explored from a techno-economic perspective, resulting in viable sets of long-term pathways under a number of conditions. However, similar to most parts of the world, most major necessary decarbonisation transformations are either not happening or happening at a slower pace than necessary. This gap between existing evidence and concrete action highlights that the carbon neutral transition is not only a matter of techno-economic feasibility, but essentially a question of political economy. Actual implementation requires clarity about the choices to be made in the transition, about the concrete policies and actions that can be envisaged, about those who can be winners and those who may lose, and the measures adopted to manage the socio-economic costs of the transition. **Scientific assessments should therefore be seen less as an instrument to illustrate transition pathways in a normative manner than as a way to determine the inclusive whole-of-society conversation that would be required to make the transition effective and acceptable.**

The DDP community behind this report has committed to this vision of the role of scenario analysis in the public debate. The body of knowledge emerging from this community aims at ensuring that the features of the techno-economic deep decarbonisation transformations are contextualized in the diversity of country circumstances and described with sufficient details and granularity to inform decisions required to drive these transformations.

This report presents a synthesis of the results of the assessments conducted in Brazil, India, Indonesia and South Africa. For each of the countries chapters, Part I describes the main features of the economy-wide Deep Decarbonization Scenario(s) (DDS), including a description of key national-scale socio-economic aspects and an explicit characterisation of the emission objective and trajectory. To realise the necessary changes to get on track to this path, a description of the Current Policy Scenario (CPS) is also presented, including a description of the main policies and actions considered. Scenario results include an in-depth description at sector level for the deep dives selected by each country. Part II of the country chapters focuses on key policy lessons, which can serve as direct inputs into policy conversations at the country level. It includes a description of the main synergies and trade-offs with country non-climate objectives, priority short-term policies and actions, with a focus on where shifts from current paths are critically required, investments patterns and key international enablers and accelerators of domestic transitions.

Thus, it provides relevant information for the Mitigation, Means of Implementation and support, and Cross-cutting thematic areas of the Global Stocktake. Whereas the report does not provide a collective picture, **bottom-up granular policy lessons from these four large emerging economies are essential input to assess the adequateness of the progress achieved and necessary action to keep the global long-term goals of the Paris Agreement within reach.**

For each of these areas, we identify in the table below against which specific guiding questions, this report can provide relevant elements:

Mitigation	**In the DDP BIICS Policy Lessons Report you can find…**
1. What are the past and present trends of greenhouse gas (GHG) emissions by sources and removals by sinks -and their underlying drivers- and mitigation efforts undertaken by Parties -and their impacts on emission and removals,28 including based on the information referred to in Article 13, paragraph 7(a), and Article 4, paragraphs 7, 15 and 19, of the Paris Agreement (para 36(a))?	Country assessments explored *Current Policy Scenarios (CPS)* to understand the outcome of the current policy packages: main features and emission profiles can be found in Part I of each of the country chapters. *Priority short-term policies and actions* section in Part II discusses priorities based on a gap analysis between CPS and *Deep Decarbonisation scenarios* (DDS).

2. What are the projected global GHG emissions and when will Parties reach global peaking of GHG emissions and achieve a balance between anthropogenic emissions by sources and removals by sinks of GHG in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty (Article 4.1 and para 36(b))?	The emission profiles of the DDS scenarios are in Part I of each of the country chapters. They represent a country-driven perspective of the national contribution to the Paris Agreement global mitigation goal in the context of sustainable development. Projections explicit emissions by sources and removals by sinks.
Means of implementation and support	
15. What are the barriers and challenges, including finance, technology development and transfer30 and capacity-building gaps, faced by developing countries (para 36(f))?	All country chapters put an emphasis on barriers and challenges for realising the domestic transformations. This is namely covered in Part 2, including two specific sections on *Investment patterns* and *Key international enablers and accelerators of domestic transitions*.
17. What is the overall progress made towards achieving the long-term vision on the importance of fully realizing technology development and transfer in order to improve resilience to climate change and to reduce greenhouse gas emissions referred in Article 10.1? What is the state of cooperative action on technology development and transfer (Article 10.2)?	This is best reflected under *Key international enablers and accelerators of domestic transitions* section in Part II for each of the country chapters. This digest focuses on the key enablers for the priority actions that have been identified to get onto the right path towards deep decarbonisation.
18. To what extent has progress been made on enhancing the capacity of developing country Parties to implement the Paris Agreement (Article 11.3)?	Progress on the enhancement of capacity is implicit in the assessment of the progress (as modelled in the CPS scenario) and the policy analysis of the gap that exists between current trends and the required level of action.
Cross-cutting	

21. What are good practices, experience and potential opportunities to enhance climate action, including international cooperation, on mitigation and adaptation and to increase support under Article 13.5 of the Paris Agreement (para36(g)? Which of these can be transferable or replicated by others? How effective was sharing good practices and experiences on climate action and support, including on enhancing the implementation of adaptation action (Article 7.14(b))?	The DDP approach underlying this report's research is fundamentally a country-driven exploration, back casting from the mid-century emission and socio-economic objectives to inform the short-term decisions within and across systems. Sectoral deep dives allow for an in-depth investigation of all levers, which are traditionally represented poorly in existing long-term roadmaps. Country-level lessons derive critical information for international discussion on overall progress, thus the entire report brings relevant evidence to this cross-cutting question.
30. What additional information is needed to enhance ambition, both of actions to take and support needed to achieve the long-term goals of the Paris Agreement, including by enhancing international cooperation for climate action?	The analyses underpinning this report have been designed under the premisses that scientific assessments should be seen less as an instrument to illustrate transition pathways in a normative manner than as a way to determine the inclusive whole-of-society conversation that would be required to make the transition effective and acceptable in specific contexts. The gap between existing evidence and concrete action highlights that the carbon neutral transition is not only a matter of techno-economic feasibility but essentially a question of political economy and policy implementation. The report intends to bring clarity for each of the countries about the choices to be made in the transition, about the concrete policies and actions that can be envisaged, about those who can be winners and those who may lose, and the measures adopted to manage the socio-economic costs of the transition. As a high-level digest, this is captured in Part 2 of the country chapters.

- The full report can be found here: https://ddpinitiative.org/wp-content/pdf/DDP_BIICS_CountryReport.pdf
- Full report and separated country and sectoral chapters can be found here: https://ddpinitiative.org

5. A country-driven perspective on long-term low-emission development strategies (LT-LEDS)

The recent acceleration and diffusion of long-term strategies has helped to highlight the domestic benefits of such an exercise for in-country decision-making on climate and development policies and implementation, including in countries where the decision to prepare a long term-strategy has been primarily driven by the Paris Agreement mandate (Art. 4.19), as this internationally-driven exercise can also serve as a precedent for domestic planning and regulation. Indeed, once the development of an LT-LEDS is on the domestic political agenda, countries do tend to take a broader perspective than just contributing to the international climate regime.

Embedding the development of a long-term low emission development strategy in the domestic agenda brings about several key benefits, including:

— Exploring synergies and trade-offs between ambitious mitigation targets and various country-driven non-climate objectives, including Sustainable Development Goals, to inform the design of concrete actions and policy packages according to a specific country's priorities, context and circumstances.

— Providing a strategic perspective on national public policy to help identify concrete policy options and necessary shifts to be adopted in the short term. In particular, by giving a dynamic picture of the expected emissions reductions for each sector, long-term strategies allow guiding sectors that are harder to abate towards a deep decarbonization transition rather than delaying these decisions while focusing only on the low-hanging fruit.

— Informing investment decisions, by providing a clear signal to public and private investors on the long-term direction of travel and the corresponding investment plans at different time horizons. Indirectly, long-term strategies can therefore serve as guidelines to drive the alignment of development banks and private investors' portfolios with the Paris Agreement's goals (Article 2.1(c))

— Exploring and shedding light upon key international enablers and accelerators of ambitious domestic transitions, thereby helping identify areas for international cooperation based on domestic needs. Indirectly, long-term strategies also contribute to ensuring coherence between climate policy and other agendas (foreign policy, national security, trade, bilateral agreements, public-private partnerships, etc.)

— Serving as a tool to creating and sustaining an inclusive dialogue between

different domestic stakeholders, including across different ministries, around a shared vision for a carbon-neutral society and the considerations to adequately manage the necessary transitions to reach that goal. Integrating stakeholder engagements in the development of long-term strategies can: (1) contribute to building awareness and ownership of goals, (2) promote the alignment of different actors' views and actions and highlight the necessary choices and potential trade-offs of action across sectors to anticipate conflict, (3) create communities of practice that can champion different parts of the domestic transitions, and (4) by doing all of the above, develop a foundation for closing the potential gap between national commitments and on-the-ground implementation.

LT-LEDS as an important input to upcoming international discussions on climate cooperation and ambition, notably in the context of the Global Stocktake:

The transformations and actions needed to achieve the Paris Agreement's global goal require a strengthening of international cooperation. This is in turn one of the key objectives of the Agreement's 5-yearly Global Stocktake. To be consistent with the Paris Agreement's bottom-up paradigm, it is essential that global cooperation priorities identify the critical enablers needed to accelerate the transformation to low-carbon and resilient economies. The LT-LEDS exercise can play an instrumental role in identifying these international enablers and understanding the main barriers to neutrality. It can therefore help focus the Global Stocktake discussions on elements that really matter for individual countries, help identify the key issues to be tackled collectively, and help build consensus on the best global and national responses. As such, LT-LEDS can be a critical input to ensure that international cooperation is framed around countries' needs for implementing their transformation to a carbon neutral and resilient economy.

The report and some blogs providing context can be found here:

- Study: Waisman et al. (2021), A country-driven perspective on long-term low-emission development strategies (LT-LEDS) - Implications for a COP26 Decision text or outcome
- Blog post: What is a "good" long-term low emission development strategy? Six key features to assess current and future submissions (June 2021)
- Blog post: Carbon neutrality starts today: the importance of LTS for robust climate multilateralism (June 2021)