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# New perspectives on Article 6: The role of international cooperation in the global energy transition

*Building compromise by developing a perspective of  
shared benefits*

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Discussion Paper

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*Please Note: This paper shall facilitate the discussion of obstacles and opportunities for a viable agreement on Article 6 of the Paris Agreement. The document is the result of discussions with diverse stakeholders and does not reflect the opinion or position of any particular person or institution.*

## **Opportunities and challenges of the Global Energy Transition:**

### *Unprecedented economic change requires an unprecedented level of cooperation*

In response to UN Secretary Gutierrez' call to present ambitious decarbonization plans at the UN's Climate Action Summit in September, 77 countries have committed to achieve net zero emissions by 2050. While these pledges represent encouraging news, only few nations have effective strategies and plans to follow suit on their commitment. The insufficiency of the *Current Policies Scenario*, as well as the *Stated Policies Scenario*, which incorporates today's policy intentions in addition to existing measures, is being flagged by the International Energy Agency's World Energy Outlook 2019.

To address the gap of current policies and political ambition, the IEA has developed the *Sustainable Development Scenario* to indicate what needs to be done to fully achieve the objectives of the Paris Agreement, i.e. to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C. To summarize this scenario, the IEA (2019) stated that "*The world urgently needs to put a laser-like focus on bringing down global emissions. This calls for a grand coalition encompassing governments, investors, companies and everyone else who is committed to tackling climate change*".

While this call for action is commensurate to the challenge and urgency that we are facing, policy makers are also waking up to new perspectives on the opportunities that a thorough energy transition offers for economic and social development.

In the case of Europe, Agora Energiewende (2019) has projected that the efficient generation and use of renewable energy in all sectors, as necessary for the path to a net zero carbon future, requires investments of 1 trillion euros between 2021 and 2030. This is about 20% higher than investments in the reference policy scenario, which is not compatible with climate neutrality. While this implies that the level of investment in Europe's energy and transport infrastructure, as well as industry and buildings will increase from 5 to 6% of Europe's GDP, the resulting stimulus will boost economic growth by a comparable level, but on a sustained basis as of 2030. Moreover, the scenario results in the creation of 1.1 million jobs, as well as 28 billion Euro in savings from reduced fossil fuel imports. This is an attractive scenario that has been motivating the political discussions in Europe and resulted in the announcement of the European Green Deal that is now being detailed by the European Commission. While this is only the start of Europe's political process, it is recognized that the realization of this opportunity requires increased coordination, cooperation and investment flows between member states, which is at the heart of the debate about further integration of the European Union.

In a similar assessment of the Global Energy Transformation, Irena (2019) comes to equivalent conclusions. In order to move from the current level of GHG mitigation, as defined by the global aggregate of Nationally Determined Contributions (NDC), to a scenario of rapid decarbonization that keeps climate change to well below 2°C, Irena projects that global renewable energy infrastructure investments until 2050 will have to increase from 55 to 90 trillion USD. At the same time, investments in fossil fuel production and use should reduce from 37 to 19 trillion USD to avoid about 12 trillion USD in stranded assets. As a result, global economic growth is projected to be 1,9% larger in 2030 and 2,5% larger in 2050. Now again, the realization of such an opportunity requires an unprecedented level of international cooperation. Only if the global community has the right instruments for multi-lateral cooperation will it be possible to mobilize the necessary international capital flows, reorganize international trade and manage the resulting structural change in diverse countries and regions of the global economy.

With this panorama in mind, this paper discusses the role and objective that international cooperation should play from the perspective of promoting a successful global energy transition. As a fundament for discussion, criteria for the definition of appropriate provisions of successful cooperation mechanisms are being proposed. Based on these criteria, the status of negotiations for Article 6 of the Paris Agreement is being discussed in order to extract elements for an agreement on the regulatory design and implementation of Article 6 at COP 25 that will be held in Madrid under Chile's presidency.

## **Critical elements for successful international cooperation**

### *Necessities to address the challenges and opportunities of the energy transition*

The logic of the Paris Agreement, which builds on NDCs as the sovereign contribution offered by each country, was essential for achieving an agreement. However, it is also a result of this bottom up approach that the sum of individual GHG mitigation efforts does not comply with the objective of limiting climate change to less than 2°C. An essential lever for reducing the global gap in ambition for GHG mitigation is international cooperation. The reason is that individual countries lack critical resources such as sufficient quantity, diversity and quality of renewable energy sources or access to the large volumes of capital at reasonable cost that are necessary for their development.

In both cases, international cooperation is the solution. It can facilitate the production and international trade of renewable energy resources or manufactured products with low GHG footprint. Moreover, it can mobilize the necessary capital flows from countries with excess domestic savings to those that lack domestic investment capacity.

Another challenge is the fact that the energy transition may generate economic hardships for contemporary societies or parts thereof. Even in the general case that the energy transition is economically rewarding in the long term, it requires increased fiscal efforts today, thus reducing capital for other, often more pressing, social necessities. On the same note, it is important to recognize that the profound transition that we envisage will have substantial distributional effects that need to be addressed.

With these perspectives, it is essential to discuss and define the role of international cooperation as a lever to increase individual and aggregate ambition of country NDCs to the level that allows limiting global warming to less than 2°C. With this objective in mind, it is important to define the roles and functions that such a mechanism shall play. Based on such a list of expectations, it is possible to design appropriate solutions, as well as the compromises that are needed for a swift agreement of effective international carbon market mechanisms.

## **Performance criteria for successful mechanisms of international cooperation:**

### *#1 Mobilizing private sector capital and international investment flows*

The lack of access to sufficient domestic and international capital with low cost is a key challenge for many economies and therefore a limit to their ambition. This is especially true for developing countries that do not have an appropriate domestic saving rate. The scale of the problem is illustrated by the fact that global investments in renewable energy solutions until 2050 will need to increase from 55 to 90 trillion USD (IRENA, 2019). Moreover, a large part of the additional funds need to be mobilized before 2030 to be effective. Globally, there is sufficient capital to promote these investments, especially if reduced investments in fossil fuel infrastructure can be channeled to such sustainable investments. Nevertheless, new strategies and mechanisms with appropriate international incentives and sound domestic enabling environments are needed to redirect existing and mobilize new financial

resources at sufficient scale and with low capital costs. It is of special importance to develop solutions for countries with low domestic savings and populations with low income and payment capacities.

## *#2 Support countries in the development of sound enabling environments*

International cooperation cannot be a substitute for domestic ambition, nor can it compensate for increased capital and thus GHG abatement cost that result from inefficient enabling environments. It is therefore key that international cooperation complements and supports countries in the creation of sound legal and regulatory frameworks that minimize capital costs and mobilize investments. For the design of such domestic enabling environments it is important that all kinds of GHG abatement on the marginal cost curve are adequately covered. Interventions with low or even negative costs shall be economic priorities for all countries. But it is also key to have strategies that mitigate and cover the costs of more capital intensive and transformational investments, even when they are not viable with domestic resources alone.

## *#3 Promoting future proof investments*

In the context of the requirement to implement a net zero carbon economy by the second half of the century, it is important that climate change policies and the resulting investments are compatible with this objective. This requires that solutions with zero or negative GHG emissions, such as renewable energy and afforestation projects, are given priority over solutions that reduce, but do not fully eliminate GHG reductions, such as energy efficiency of fossil fuel-based energy sources. Moreover, it is important to understand that carbon trading as an international mechanism for cooperation is important in the transition towards a global net zero economy. At the same time, it must be clear that the role of carbon trading will diminish as the global economy decarbonizes. In the future of a climate neutral global economy, the role of carbon markets must be limited to a residual trade of net negative carbon units that offer the flexibility of compensating unabatable residual GHG emissions only.

## *#4 Supporting the just transition in fossil fuel exporting countries and regions*

Driven by decreasing costs in generation, storage and use of renewable energies, the energy transition is accelerating and some regions already experience a decline in fossil fuel consumption. This effect is expected to continue. In a scenario that is compatible with limiting climate change to less than 2°C, IRENA (2019) projects that aggregate fossil fuel demand declines by 20% until 2030 and by 64% until 2050. This demand reduction will first be felt by coal exporting countries, but then also impact countries that produce oil & gas. In order to manage this structural change and avoid that these countries increase domestic use or dump their fossil fuels on the market to postpone the socio-economic effects of the transition, it is important to establish global mechanisms that support these economies in their structural change for a just energy transition.

## *#5 Building the global energy market of the future*

While production and trade of fossil fuel is projected to reduce, it is important to prepare for an expected growth in production & trade of renewable electro-fuels<sup>1</sup> to beyond 20.000 TWh by 2050 (WEC, 2018). This volume is equivalent to about 13% of today's global energy demand and 50% of today's consumption in crude oil. Its production will require the implementation of 3 to 6.000 GW in

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<sup>1</sup> The concept of renewable electrofuels includes hydrogen that was generated from electrolytical splitting of water with renewable energy, as well as organic compounds such as methane, methanol or other hydrocarbons produced from hydrogen as well as renewable CO<sub>2</sub> sources.

water electrolysis equipment, mainly in countries with abundant and diversified renewable energy endowments, most of which are developing economies.

To develop these value chains, it is essential that technological costs are reduced at global level and that the enabling environment in potential exporting countries supports such developments. Moreover, it is key that domestic energy and GHG mitigation necessities of such exporting countries take precedence over exports and that local communities benefit to ensure their support. It is therefore sensible to promote the development of these projects first for the decarbonization and low emissions development of local economies. The export of the resulting GHG reduction may compensate for the incremental cost of these projects and prepare for the subsequent export of hydrogen-based fuels once local decarbonization is sufficiently advanced.

#### *#6 Speed of implementation and scalability*

To meet the challenge of limiting climate change, it is essential to mobilize substantial investments in the shortest time frame possible. While private sector is aware of the challenges and opportunities, its effective engagement depends on the implementation of sound and credible rules that ensure the entitlements to GHG abatement units that result from capital investments, technology transfer or innovation under different jurisdictions and arrangements. As a result of the CDM (Clean Development Mechanism), that initiated together with the Kyoto Protocol in 2005, GHG mitigation investments in developing countries grew fast to an aggregate of more than 400 billion USD before the market crashed in 2012. The development of the mechanism and the capacities of all market participants took time, but once investors had learned to comply with the rigorous regulation, the CDM demonstrated its capability to mobilize transformational investments at scale. This was possible because investors trusted the framework and the long-term commitment for continued GHG abatement. To build on this capacity for swift capital mobilization, it is therefore important to recognize early action and build on the CDM to ensure a swift evolution towards a reformed mechanism that can further upscale and accelerate investments.

#### *#7 Combine credibility and low transaction costs*

Unfortunately, the trust in continued ambition for GHG abatement and international cooperation on national and multilateral level was severely eroded after the global community failed to agree how to continue international cooperation at the end of the Kyoto Protocol's first commitment period. Part of the problem was that the GHG emission reductions that were promoted by the CDM could be used by countries with targets under the Kyoto Protocol, but that host countries did not have to account for the exports due to their lack in tangible targets. Only in 2015, with the Paris Agreement, a new framework has been agreed. As an evolution from the situation under the Kyoto Protocol, all countries now have more or less quantifiable GHG mitigation obligations as part of their NDCs. Nevertheless, the global community so far failed to define the rulebook for international cooperation and carbon market mechanisms. It is therefore essential, that COP 25 in Madrid finally provides solid rules that establish sound and effective carbon market mechanisms with credibility and low transaction costs.

## *#8 Increase global ambition for GHG abatement*

As a result of technological progress, the cost of GHG mitigation have greatly reduced. Nevertheless, successful GHG abatement is still subject to capital availability for new renewable energy-based infrastructure with long term maturity, as well as the necessity to substitute fossil fuel-based energy infrastructure that is not yet fully amortized. As a result of these economic realities, some countries face high GHG abatement costs, while others do not have the funds to finance even GHG mitigation opportunities of moderate cost. Such a scenario of diversion in GHG abatement cost due to differences in legacy infrastructure, renewable energy endowment, access to technology and capital offers ideal opportunities for the use of flexible carbon market mechanisms. To illustrate the economic benefits of global carbon market mechanisms, IETA has developed a model to quantify the cost reduction that would result from such a scenario. In a first assessment that is limited on a static evaluation based on achieving current NDC's, their study indicates economic savings that grow to 250 billion USD per year by 2030. Considering our objective to increase the ambition of NDC's, their model indicated that the reinvestment of the savings in additional GHG mitigation would allow to abate an additional 5 billion t of CO<sub>2</sub> e by 2030, i.e. facilitate the urgent increase in GHG abatement ambition under the Paris Agreement (IETA, 2019). Based on this static assessment, it is evident, that an effective global carbon market mechanism would also facilitate further GHG mitigation, especially if it results in accelerated innovation, technology transfer and international cooperation.

### **The scientific and political context:**

#### *Promoting sound global cooperation to close the gap in global ambition for GHG mitigation:*

The 24<sup>th</sup> Conference of the Parties to the UN Climate Convention concluded with the adoption of the Katowice Climate Package and as the first Meeting of the Parties to the Paris Agreement, with the acronym CMA (Conference Meeting Agreement). In addition to this institutional milestone, the rule-book for the Paris Agreement was adopted and therefore Katowice has, with one exception, provided us with the institutional and regulatory fundamentals for the implementation of the commitments that were agreed under the Agreement.

While this is an important milestone in the global fight against climate change, it is essential to recognise that the aggregated commitments for greenhouse gas mitigation, as defined by parties in the form of NDCs, fall significantly short of the objective of *“Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels”* as defined by the Paris Agreement. In order to estimate this gap in global ambition for GHG mitigation, UNEP (2019) evaluated the result of aggregate NDC commitments and concluded that the diligent implementation of current commitments would lead to an increase of about 3.2°C in global warming by 2100. Only if ambition for global GHG mitigation increases significantly and fast, the options to limit climate change to a scenario that is *“well below 2 °C”* can be retained and achieved. In order to *“pursue efforts to limit the temperature increase to 1.5 °C”*, even more dramatic and rapid reduction in global GHG emissions is necessary.

In recognition of this ambition gap, the Paris Agreement has established a periodic mechanism to take stock of the collective progress towards achieving the environmental objective of the Agreement. The first formal review is scheduled for 2023 and parties are required to revise their NDC's as well as enhance mechanisms for international cooperation for climate action. As this provision indicates, international cooperation is an essential instrument to allow countries to increase their level of ambition. The importance of cooperation is also indicated by the fact that many countries have announced

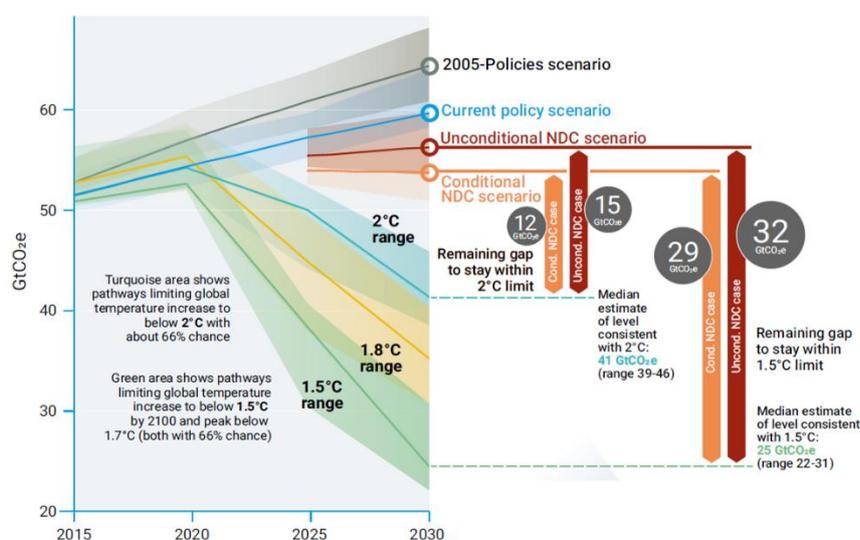
more ambitious NDC scenarios in case effective international support in the form of i) technology transfer; ii) capacity building; iii) climate finance; and iv) carbon market mechanisms is made available.

While the Paris Agreement provided the fundamentals for items i) to iii), the possibility to foster international cooperation and investment with the use of international carbon market instruments, as defined by Article 6 of the Paris Agreement, is still obstructed by a lack of agreement on elements such as accounting of international transfers and the recognition of early action, i.e. the transition of the CDM and its projects as developed under the Kyoto Protocol. This is of special concern as Article 6.4 is crucial to promote and regulate the action of private sector investors which have the financial, technological and organisational means that are essential for swift and comprehensive climate action at the scale that is needed.

Figure 1 visualizes that the aggregate GHG mitigation defined by NDCs allow to reduce the level of climate change, but that more significant and faster GHG abatement is necessary to limit climate change to 2, respectively 1.5°C.

The fact that GHG abatement of conditional NDCs help closing the gap illustrates the importance of international cooperation to increase ambition.

Figure 1: Global GHG emissions under different scenarios



Source: UNEP Emission Gap Report 2019.

In consideration of the urgent necessity to foster global ambition and the crucial role that flexible mechanism have for mobilizing capital towards low emission development investments, the next section analyses problems and obstacles that have prevented an agreement in Katowice in order to develop a proposal that can support the negotiation of an agreement at COP 25 in Madrid.

## Context and the challenge at hand:

The development of rules for the implementation of collaborative approaches defined by Article 6 of the Paris Agreement are the last missing cornerstone for the fundament of an effective global climate regime. In fact, many share the view that the implementation of effective carbon market instruments, as defined by Article 6, are the key to a global net zero carbon economy. The argument is that the sum of individual contributions made by parties will not suffice, but that sound cooperation allows to increase ambition by minimizing global costs and mobilizing capital that is needed for transformational action in developing countries. As cited before, IETA illustrates this argument by showing that sound global carbon markets allow to double GHG mitigation results without generating additional costs for the global economy. Of special relevance in this discussion is the possibility of engaging private sector investors, an opportunity that arises under Article 6.4, and that builds on the concepts and experiences of the Clean Development Mechanism (CDM). In addition, Article 6.2 defines provisions for the development and transfer of Internationally Transferable Mitigation Outcomes (ITMOs). The Paris Agreement defines ITMOs as transactions that are directly managed by governments and that are subject to full accounting of international transfers. The concept was dubbed corresponding adjustments, a term that describes the double book keeping of ITMO transaction between parties. Yet, the provisions for accounting of Article 6.4 transactions are subject to specific controversies. This text seeks to elucidate critical aspects of the discussion and develop proposals for a political compromise.

Before entering the discussion, it is important to remind that Article 6.4. evolved from a proposal on the creation of the Sustainable Development Mechanisms (SDM), that was made jointly by Brazil and the European Union. In simplified terms, the SDM is an evolution of the CDM, with reinforced focus on sustainable development outcomes, the objective of increasing ambition, as well as the requirements for some form of accounting of generation, transfer and use of the emission reductions units that arise from the mechanism. As referenced by the lack of agreement, as well as the discussions that evolved around Article 6.2 and 6.4 at COP 24<sup>2</sup>, it is apparent that countries are still struggling to define several critical elements, including two major obstacles:

- 1) The definition of rules and provisions that allow the transfer of CDM projects and their achieved and future emission reductions;
- 2) The definition of accounting rules to satisfy requirements of environmental integrity.

Given the fact that article 6.4 is based on the CDM and that the lack of appropriate accounting has always been a major concern in relation to this mechanism, it can be argued that rules for appropriate accounting and the relation of project activities to a country's NDC are actually the overriding concern to be addressed.

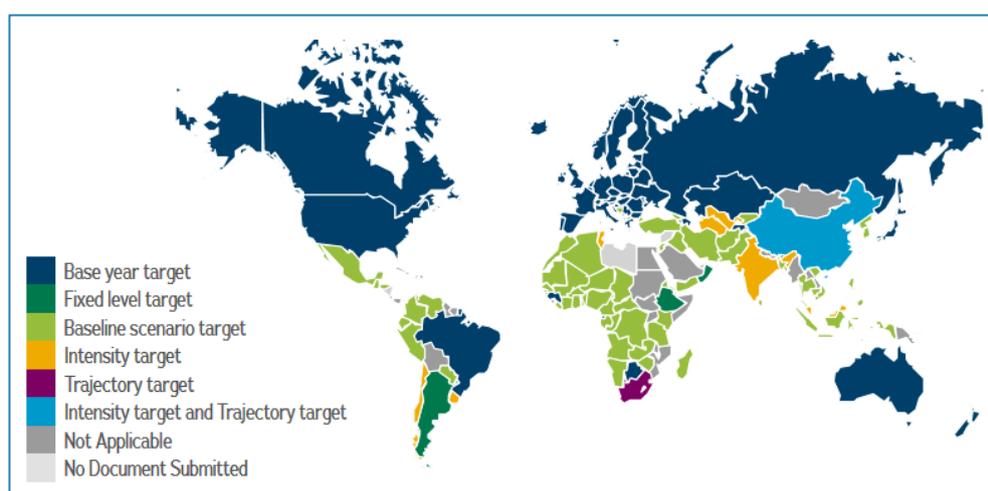
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<sup>2</sup> A good summary and analysis of these discussions is offered by different articles published by the European Roundtable on Climate Change and Sustainable Transition (ERCST), available from <https://ercst.org/publications/>

## The role of international carbon markets from developing country perspective:

In line with the bottom up approach of the Paris Agreement, Parties have presented diverse types of NDCs. As visualized by Figure 2, most developed economies have adopted an absolute emission reduction target related to a specific base year, a fact that takes into account that the natural economic transition of mature economies facilitates the peaking of GHG emissions. As a general rule<sup>3</sup>, this condition is not given in developing and emerging economies, where industrialization and economic ascent of poor population in a baseline scenario lead to increasing GHG emissions. In order to account for this natural tendency, these economies have mostly presented GHG mitigation commitments that deviate from a projected baseline, that accelerate decarbonization of growing economic output, or that condition the GHG emission trajectory.

Figure 2: Overview of different NDC types in terms of reference for GHG mitigation



Source: WRI - CAIT Paris Contributions Data

Another important element for the discussion is that many developing countries have established NDCs that do only cover part of their economy, i.e. that exclude specific activities such as land use or other sectors.

Finally, it is important to recognize that these NDCs are generally based on the economic status and outlook as available in the year 2014: Therefore they consolidate, in more or less explicit manner, the results of GHG policies and mitigation actions that were developed in the period after 2005, the year of the Kyoto Protocol entered into force, as well as 2009, which initiated the development of Nationally Appropriate Mitigation Actions (NAMAs). As a result of these efforts and policies, countries and their investors have engaged in substantial GHG mitigation efforts and investments that have defined the basis for the definition of their NDCs. Therefore, NDC's in general are already adjusted for these early actions, which need to be recognized as a fundament for the development of new national and

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<sup>3</sup> Countries that have or had large LULUCF related GHG emission may present a different profile as these emissions behave different from emissions are related to growing industrialization and energy use. Brazil is a good example and as a result it is one of the few developing countries with an absolute GHG mitigation target of -38% until 2025 in relation to the base year 2005.

international market regimes and that hold important experiences and lessons learned for the definition of new mechanisms.

### The importance and challenges of sound accounting to create effective carbon markets:

The fact that the Article 6.4., as well as subsequent negotiation texts, are largely based on the CDM, illustrates the importance of the original mechanism. At the same time, it reminds us that a sound understanding and accounting of international transfers is essential to avoid criticism and ensure sustainable demand. For this reason, many actors are calling for provisions of corresponding adjustments not only for ITMOs, but also for transfers under the Article 6.4 mechanism.

Now when analyzing the original Article 6.4, provisions for accounting are weaker than those that were established for Article 6.2. In fact, paragraphs 6.4 (b) and (c) convey the concept that the mechanism supports mitigation in the host country. Moreover, according to Article 6.5, as long as mitigation results are not used by the host country to demonstrate achievement of its NDC, the resulting units may only be accounted for by the party that acquires the resulting mitigation outcomes.

The wording seems like an example of constructive ambiguity that may have been necessary to conclude the negotiations in Paris, but now, the issue will have to be solved in a constructive manner to establish the fundamentals for real action. Brazil, one of the proponents of the SDM that resulted in Article 6.4, has been particularly vocal<sup>4</sup> in objecting to comprehensive corresponding adjustments, while defending that the projects mechanism defined under Article 6.4 shall either support countries in their NDCs, or promote projects with challenges that go beyond the means of NDC policies.

It is therefore worthwhile to reflect on the reasons and argument behind these positions to identify ground for compromise. To facilitate the discussion, Figure 3 visualized the concept based on the concrete example of Brazil.

#### 1) Recognition of early action:

While it is not yet clear how and to what extent the CDM will be transferred to the new Article 6.4 mechanism, it is sensible to assume that its rules will also apply to any CDM project or emission reduction that is transferred. For this reason, the accounting regime adopted for Article 6.4 will impact the status of recognition of these early actions, as already explained above. In the case of full corresponding adjustments for transfers and limitations for banking, the efforts and results of these early actions would in fact increase the ambition of a country's NDC. As a result, these early actions would not only be ignored, but countries would be penalized for their past mitigation activities as any international transfer would in fact require an additional ton of abatement for compensation. Moreover, the situation creates conflicts between host countries and investors: Under the rules of the CDM, project investors obtained approval from host countries for the development of projects which delegate the ownership to emission reduction results to the investor. Limiting the use or export of these assets would therefore represents a retroactive change of rules.

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<sup>4</sup> While Brazil has been defending this position, it is plausible that it had the backing of other major developing economies that share the concerns that Brazilian negotiators have been putting forward.

## 2) Difficulties in national accounting and consolidation risks:

Any material GHG mitigation activity developed in a country will contribute to a reduction of its national GHG inventory. Unfortunately, methodologies for project based accounting and national GHG inventories are different in ways that are not immediately comparable. Many make the argument that project baselines under the CDM are conservative. As a result, CDM projects tend to generate GHG reductions for the national inventory in excess to the credits that they receive. Nevertheless, it will take some time until this relation is clearly established and recognized for different technologies and methodologies, so that countries can manage and fully account for the effects of projects that are being developed within their national inventories and NDCs.

## 3) The necessity to establish long term GHG management policies

The attraction of a sound international carbon market with due accounting and corresponding adjustments for compliance regimes such as the Paris Agreement and CORSIA<sup>5</sup>, is the possibility to establish forward sales arrangements that can mobilize the capital to finance the necessary GHG mitigation investments. Without such levers, such projects are hard to implement, especially in countries with financial constraints. While this is an appealing logic that could allow transformative action with GHG mitigation benefits beyond a country's NDC commitment, it is also evident that such a strategy requires the capacity for comprehensive long-term planning and sound management of a country's GHG inventory. Again, this is possible, and ultimately the key to increasing ambition, but the development of such practices and the necessary infrastructure takes time. Therefore, it is understandable that some countries refrain from a very rigid accounting system at this stage.

## 4) Strategic focus on capital and cost intensive GHG abatement

Countries have a strategic interest to ensure that "low hanging fruits", i.e. GHG abatement opportunities that have low cost and limited capital demand, are used for domestic GHG abatement. Therefore, the export of GHG emissions reductions is only of interest if they help to implement projects with high costs or that demand significant volumes of capital or technologies that are not readily available. While this objective is sensible and aligned with the interest of promoting GHG emission reductions that effectively go beyond the means of a host country, the design of policies and strategies that allow to regulate such segmentation requires the development of new regulatory strategies and capacities.

## 5) Defining the reference for corresponding adjustments

Many industrialized countries have adopted absolute GHG mitigation targets that are compatible with the concept of the Kuznet's curve that defines that economic development naturally leads to a peak and then to a decrease of environmental impacts. For developing countries, the expectation of increasing environmental impacts due to early economic expansion makes the definition of absolute targets difficult, which is seen as a problem for the definition of GHG mitigation targets that can be translated into a carbon budget. While only such quantifiable carbon budgets can be a solid reference for

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<sup>5</sup> For voluntary or domestic market regimes, such rigid accounting is redundant as long as transfers are not accounted against any legal compliance regime. For a more detailed and nuanced discussion on the voluntary market position, including scope 1, 2 and 3 footprints, please see [www.icroa.org](http://www.icroa.org)

corresponding adjustments, the Paris Agreement recognizes under Article 4.4, that their definition will require time:

*“Developed country Parties should continue taking the lead by undertaking economy-wide absolute emission reduction targets. **Developing country Parties should continue enhancing their mitigation efforts, and are encouraged to move over time towards economy-wide emission reduction or limitation targets** in the light of different national circumstances.”*

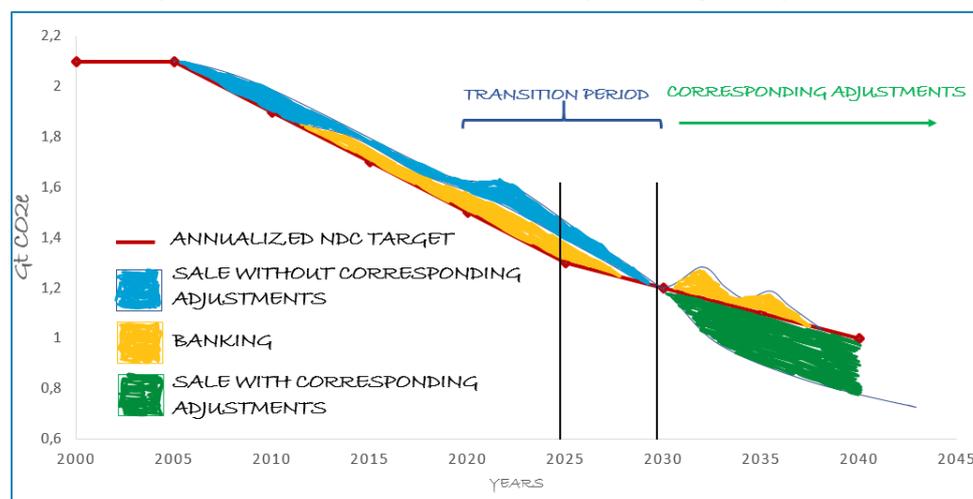
It is therefore essential that the discussion on accounting of international transfers considers the necessity to develop solid and economy wide NDCs as a solid reference for corresponding adjustments. Moreover, it is important that the provisions for Article 6 are designed to motivate countries to adopt such “*economy-wide emission reduction or limitation targets*” rather than to prevent it. The promotion of domestic markets, as well as voluntary demand, are an essential lever to increase global ambition and to ensure that GHG mitigation on all levels of the marginal abatement cost curve are being mobilized with the appropriate incentives.

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Figure 1 visualizes how CDM Project activities contributed the Brazil's GHG reduction and how these early action results can be amplified, transferred and integrated into a future global GHG accounting regime with full corresponding adjustments.

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Figure 3: Visualization of accounting and banking of emission reduction units on the basis of Brazil's NDC with evolution towards full corresponding adjustments.



Source: Own illustration

## Possibilities for common ground:

In the search for common ground, parties should recognize the structural importance of ample and efficient carbon markets at national and global level and that private sector engagement is crucial to mobilize the capital that is needed. To ensure the necessary scale and success, it is obvious that sound accounting is necessary. Nevertheless, it is also important to acknowledge, and further promote, early action. In order to allow for swift action, it is recommended to build on the CDM and to offer an appropriate transition period for the requirement of corresponding adjustments that allows countries to build the necessary capacities. The goal of the transition period should be to ensure a swift, but consistent evolution from the carbon market logic of the Kyoto Protocol, which is technically valid until 2020, to the new market regime that will start in 2021 and relates to the NDC commitments of 2025. In order to align these objectives, the following conceptual elements could be helpful:

### 1) The definition of a transition period:

While international carbon market mechanisms are a powerful tool to support or deepen the ambition of NDCs, it is important to understand that the development and crediting of projects, programs or other activities under an NDC is subject to a set of complexities that have to be addressed with sound regulation and capacity building. It is therefore rational to establish a transition period that allows countries to evolve from simple reporting of exports to full corresponding adjustments of transacted emission reduction units. While the date is subject to the political debate, the minimum period for transition can be set as early as 2026, while the latest date to agree to full corresponding adjustments should be 2031. In Figure 3 that has been elaborated for illustration, a transition period up to 2031 is being adopted. While the definition of the appropriate date is subject to the political negotiations of parties, it is important to recognize that the creation of appropriate demand is fundamental for such an agreement. In absence of tangible demand to promote and recognize early action, the world risks facing another 7-year period of neglecting GHG abatement such as the one to from 2012 to 2019.

### 2) The recognition of early action

It is essential for countries that have developed CDM projects to ensure that their efforts and results are recognized as early action, so that they can also reward their investors according to terms that are compatible to the original conditions. At the same time, it is important that CDM activities are re-accredited according to rational and efficient rules and procedures to ensure the creation of a homogeneous market. This is done best together with the extension of the projects' crediting period in order to minimize costs. Ideally, reformed CDM projects shall be subject to the same rules and procedures as other projects developed under article 6.4, providing these rules are broadly compatible with the conditions offered to investors by the CDM and under the original letters for host country approval. As part of this extension, host countries will also be able to define which project activities shall be authorized for exports and which should be accounted for under domestic GHG abatement targets.

### 3) Market status and use of emission reductions

During the transition period, emission reductions generated by reformed CDM, as well as new Article 6.4 projects do effectively represent a support to the implementation of the host country NDC. In cases where this leads to overachievement, this should be seen as a welcome ground for enhancing the ambition of the NDC. Therefore, any volume that has been transferred should be discounted from the available volume for ITMOs to avoid the double crediting of emission reductions that may occur if a country goes beyond its NDC commitment. If countries prefer, or in the absence of international

demand, they shall be allowed to bank the emission reductions generated from early action and carry it over for compliance with their future NDC commitments. Such a flexibility mechanism would not only support early action, but also accommodate concerns with compliance to NDC commitments, a fact that can support the definition of more ambitious targets.

#### 4) Promoting domestic carbon pricing and global ambition

Implementing a global price for carbon that is representative of the environmental constraint that our atmosphere imposes would be economically effective, but socially disruptive for countries with low income. It is therefore important to implement carbon market mechanisms that allow price differentiation, while still maintaining coherence and fungibility. The use of Article 6.4 mechanism as a facilitator of domestic GHG abatement with lower costs offers such an opportunity, as long as countries are willing to set an appropriate price level and domestic demand for such cost-effective mitigation opportunities and as long as they prevent such units from being exported. In complement to such a domestic market reserve, countries could define strategic sectors or activities where export is allowed in order to compensate for high abatement costs. The result would be an asymmetric carbon market that can be controlled by host countries according to their strategic interests of achieving domestic abatement at least cost, while attracting international support for more expensive, but strategic GHG mitigation activities.

#### Conclusion:

The discussion on Article 6 and especially Article 6.4 and how to deal with the CDM is subject to strong ideological controversies. The argument of those that insist on strict accounting and a default on all established CDM investments is that any tradable unit that is not subject to corresponding adjustment is a dilution to already feeble ambition. The argument of those that promote a more pragmatic approach is that the lack of flexibility and international cooperation imposes costs and limitation that prevent higher ambition and that defaulting on CDM investments would create a moral hazard that will limit appetite for investments under a new mechanism that would take years to build.

With both perspectives in mind and based on a pragmatic analysis of the political and economic realities in developing countries, this paper proposes a compromise that aims at building a bridge from the logic of the Kyoto Protocol to a new and more cooperative logic of the Paris Agreement.

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