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Wanted: Real Progress

Article 6 negotiations must deliver results in 2017

Content

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editorial

Dear Reader!

Robust accounting, contributions to raising ambition and sustainable development, relationship to NDCs, defining ITMOs – these are just some of the key issues related to the market mechanisms under the Paris Agreement's Article 6. The climate talks at the UNFCCC summit in Marrakech saw a second round of initial discussions on these elements, yielding important insights into different ways in which Parties could interpret the Paris texts. Yet in his analysis of the conference, our author argues that the Article 6 negotiations lag behind the discussions on other elements of the Paris Agreement and that the 2017 market mechanisms negotiations must focus on the essentials and produce results (see adjacent article).

Also in this issue, we look at ways on how CDM activities, credits, rules and institutions might possibly transition to the Paris Agreement architecture. We also analyse at the situation concerning the voluntary carbon market under the new Paris architecture and present an initiative to set up a regional carbon pricing scheme in the Carribean.

The World Conference Centre Bonn will host the UN climate talks twice this year. May the spirit of Germany's former seat of government help in achieving substantial progress in the negotiations!

Christof Arens

Wuppertal Institut

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Getting Down to Business

Carbon market negotiations should exit shallow waters

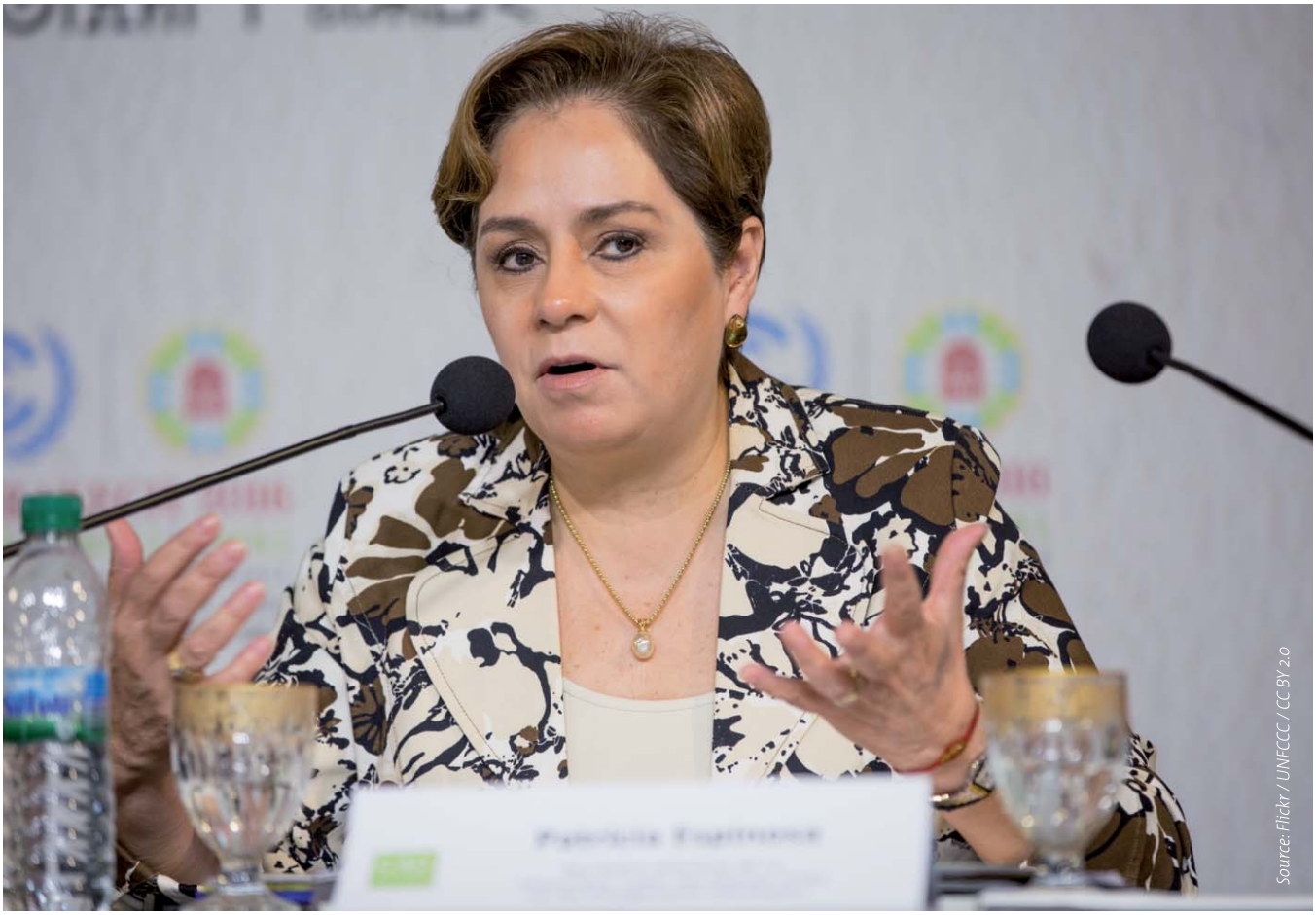
by Thomas Forth, Advisor to BMUB

There have been many positive signals for the reconstruction of a global carbon market over the last two years. The list starts with the Paris Agreement and Article 6, which offers options for collaboration between Parties that goes way beyond the offsetting character of the flexible mechanisms of the Kyoto Protocol. It is, however, important to mention that the first clear signals were actually sent in a few countries' INDCs in the run up to Paris, encouraging further supply by host countries on the international carbon market by providing demand for international certificates. There has also been a broader range of Parties, who, despite limited participation in the CDM, stated in their INDCs their interest in using carbon market mechanisms in the future as one way of supporting international efforts for sustainable development and enabling the capability of developing countries to tackle climate change.

We had already seen more constructive activities for the carbon market, and these were encouraged by the Paris Agreement: the Carbon Market Platform, promoted under the German G7 presidency, now widened to G20; the Declaration on Carbon Markets, initiated by New Zealand, working on a global consensus on environmental integrity. Added to these comes the growing number of World Bank initiatives and programmes, which form a very suitable network of donors and implementing countries to address technical issues and practical experience on mitigation activities with different market concepts (see the article 'Supporting Action' in this issue). We should also consider the domestic level, where we can observe that carbon market and carbon pricing mechanisms are no longer theory but reality.

However, to revive the global carbon market, as seen under KP CP1, we need more than encouraging signals. This is the direction taken by the ICAO Assembly resolution on the "CORSIA" offsetting and reduction scheme, which is designed to enable achievement of carbon neutral growth of the aviation sector by 2035. CORSIA is widely considered as the first serious step for the sector to address climate change, but this will not serve the sector in the longer term. CORSIA's contribution to demand will be between 4 and 5 Gigatonnes, which must be reduced by 2035, with demand for international certificates coming on top of the Paris Agreement NDCs. For implementing countries this is a good opportunity to find partners for the conditional part of their NDCs. However, its impact might only last a few years. The delivery obligation for the airlines is set for 2024.

All these activities and signals are encouraging, but nonetheless, a revival of the global carbon market is miles away. The challenge is to provide the basis for encouraging Parties to use markets on a much broader scale. My basic assumption is that there is

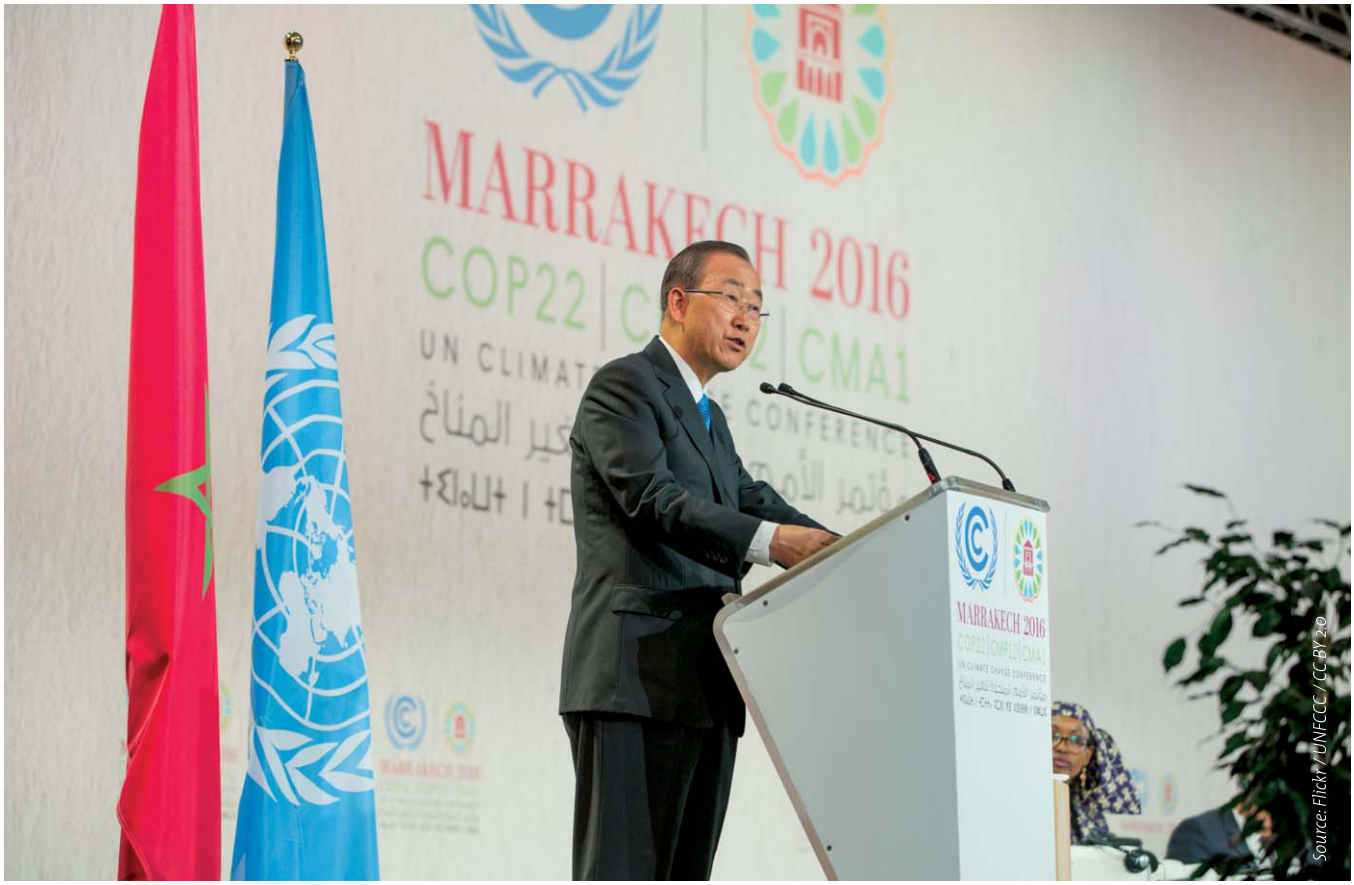


Implementing the Paris Agreement: UNFCCC Executive Secretary Patricia Espinosa at the Marrakech climate summit.

still a severe risk that the carbon market will not play an important role for the Paris Agreement, even given the fact that Article 6 is well embedded in PA architecture. Article 6 is formulated in a way that ambition-raising, both at Party-level and also globally, should be the desired impact. None of the paragraphs allow for mitigation outcomes, be they certified under UNFCCC oversight or not, to be deducted from the accounts of the implementing countries if those units are needed for NDC compliance. Collaborative partners on the buyer side must take this into account. This could be summarized as: "ambition first, offsetting second". I make the case that as long as the UNFCCC negotiations are not making progress on market and transparency regulations concerning this crucial requirement, Parties will refrain from any deliberation on creating demand on the global carbon market. Should this be the case, it will impact global stocktaking, related dialogues and the next round of NDCs.

UNFCCC negotiations – the next cliff

There is no reason for pessimism as long as the challenges are taken seriously and political gambling on minor policy levels is avoided. Looking at the broader setting of UNFCCC negotiations, many Parties and negotiators do not see the need for a global carbon market at this stage of negotiation. The above-mentioned positive signals do not help them to understand what needs to be done when market negotiators are unable to deliver an implementable outcome. Given the current situation that they have to



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Encouraging action: UN Secretary General Ban Ki-moon addresses the delegates.

recognize in the formal context of negotiations – that there is little demand from potential buyer countries recorded in the NDCs, and that they can see that, as in previous years, carbon market negotiations after Paris have got off to a very slow start.

This duality is a double burden for market negotiations, which separates them from the negotiations on core elements of the Paris Agreement. And we should not be mistaken about the risks involved if market negotiations lag behind schedule. We can all recall the clinical situation for markets at the Paris COP not so long ago, which almost resulted in nothing. Fortunately, this did not happen for obvious reasons, but French rescue vans maybe not always be on hand.

But inspite of this, Paris was a big success, because we did not obtain a draft outline of updated project-based mechanisms, which have served offsetting purposes for companies and Parties under the Kyoto-Protocol. What we got was Article 6 and its strong sense of collaboration. In contrast to the flexible mechanisms of the Kyoto Protocol, with the 'CDM deal' of low-cost certificates for Annex I countries and more 'sustainable investments' for Non Annex I countries, the transfer of mitigation outcomes under Article 6 PA is based on the success of domestic action, defined in NDCs, and subsequent domestic strategies and policies aiming to bring GHG emission on a path of staying well below 2 degrees and the Paris Agreement Long-Term Goal.

Again, the transfer of mitigation outcomes is based on the success of domestic policy, contributing to implementing countries' NDCs. To achieve market development, this calls for a different understanding

of how, where and when the creation of the new carbon market differs from the historical development of the CDM market. The CDM case was a very simple story: Parties and companies with obligations under the Kyoto Protocol undertook expeditions to identify the low-hanging fruit for GHG emission reduction in developing countries. The project-based approach was more than appropriate for that purpose. A new market has to reflect that the primary objective of Article 6 is to support Parties in raising their ambition. The new mechanisms are expected to be inherently suited to up-scaled mitigation activities and fully in line with domestic climate change policy, as especially noted in the NDCs. This is where new carbon markets must find their ties.

If carbon market negotiators accept the paradigm shift of the Paris Agreement, and also this interpretation of Article 6, it could be summed up as: "ambition first, offsetting second". That means that all mechanisms under Article 6 PA have to allow for cooperative activities that go beyond the unconditional commitments of an implementing Party. This might be evident and a repetition from the beginning of this article, but it is not widely accepted that many safeguard regulations from the Kyoto time are obsolete or must be redefined. This is true given the fact that the diversion into developed and developing countries has been transformed insofar that all countries contribute to combating climate change, especially by means of their international commitments (NDCs), but also due to the fact that all Parties can be both buyers or sellers on the global carbon market.

NDCs only one reference point for carbon markets

Implementing countries can provide relevant information at any time

Many of the standpoints put forward in the negotiations focus on how NDCs should be assessed and categorized in order to identify necessary requirements. And some negotiators are considering the possibility of different rights for Parties in their use of Article 6.

At the same time, we see yet other positions emerging which are in favour of solving the additionality issue. One of the strongest arguments is the scaling-up potential of the new mechanisms, which are policy-based. Both dimensions, the questions on the appropriate NDC reference and the challenge of the additionality check, are based on serious concerns, but they are still not reflected in a reasonable way.

With regard to the NDCs, we have observed that the first round of NDCs has led to a huge global effort on tackling climate change, even though Parties struggled with a relatively short process of negotiating the content and design of the NDC, and policies have to be formulated, coordinated and decided by governments at home. Taking this into account, the overall political impact of putting climate change on the agenda of so many countries is a tremendous success and a rich dowry for the Paris Agreement. However, in many cases and in many dimensions, the quality of elaboration of these NDCs is very general and falls short of a GHG emission pathway of staying well below 2 degrees Celsius. That generality also applies to NDCs serving as a reference point for Article 6.

Against this backdrop, the most common differentiations of NDCs – both conditional and unconditional, and concerning mitigation activities inside or outside an NDC – cannot overcome the shortcomings of the existing NDCs. For the time being, perhaps for one or two more NDC cycles, we need to address the discrepancies in the need for transparent entry points for cooperative mechanisms. These entry points are key in deciding whether mitigation activities support the actual domestic contribution of a Party in efforts to mitigate global climate change or if mitigation efforts go beyond this and allow for the transfer of mitigation outcomes (ITMO) under Article 6, paragraph 2 or Article 6, paragraph 4. If NDCs did not define these entry points, then the question is what could serve as a substitute? The NDCs are reported to UNFCCC as a mandatory requirement, but their content is self-determined and therefore voluntary. Remedies are needed.

"Clean Energy: A 'solar tree' for charging mobile devices at the Marrakech conference venue.

In providing these entry points from the perspective of an implementing country, the easiest way to define them is in domestic policies, regulations and programmes. Foreign cooperation partners would also benefit from such definitions, because these things are legally binding and assumed to be operational. This is, however, wishful thinking as long as implementing and investing countries are not prepared and encouraged:

- There is a great need for capacity-building in technical features for the collaborating sides. That sounds more complicated than it is. Here, we can build on the CDM experience with the PoA approach and the standardisation of baselines, and we can learn from benchmarking experiences gained in the cap-and-trade systems.

These technical features could be embedded in the broader framework of domestic policies and programmes. For example, PoAs could be considered as appropriate options in sector programmes, which focus on GHG emissions by small installations, which are driven by micro SMEs. The benchmarking could be more effective in sectors comprising medium and large emitters, which could be covered at a later stage under a cap-and-trade system. These two proposals are emerging from the international collaboration perspective. It makes a great deal of sense to draw a bigger picture, which is possible when domestic carbon markets and carbon pricing approaches are taken into account. Carbon tax combined with domestic offsetting is a highly

prominent solution. Subsidy reform could be promoted in the same way, but instead the offsetting activity focus would be placed on the subsidy-related emissions. These subsidies could be used to incentivise transformation or something else, if a phase-out-strategy is possible.

- When it comes to empowerment, things are not in the hands of willing actors of collaborative Parties and the private sector. Here, single Parties and investors are at the mercy of the UNFCCC negotiators. If they get down to business this year, there will be a good chance to continue at the same speed as other negotiation tracks. What Article 6 requires could well be done by 2018. However, some Parties tend to complicate things as – intentionally or otherwise – they put new blockades in place. In actual fact, we have seen a lot in market negotiations in the past. For example, the "E plus / E minus" regulation, the review of the CDM modalities and procedures, and, of course, all the "post Bali" SBSTA items – Framework Various Approaches (FVA), New Market Mechanism (NMM) and the Non-market approach (NMA). These issues are still a burden to UNFCCC negotiations, but to solve them is not the key to successful negotiations on Article 6. Here, we have the chance to avoid new blockades. One of them would be to break off the debate about Article 6, because some negotiators are not willing to speak about the new aspect of Article 6 until issues concerning CDM transition are solved. Yet another group of negotiators says it would be reasonable to wait with CDM transition until we know what Article 6 actually looks like.

If these mutual refusals dominate the limited negotiating time available in 2017, we will be not able to do our homework and this raises concerns that we will lag behind the negotiation tracks on core elements of the Paris Agreement. In the light of this risk, a CDM transition initiative has been launched by ClimateFocus and Koru Climate with the intention of working out substantial options ahead of the next SBs, which will hopefully facilitate the start of real negotiations that will ultimately lead to a fruitful compromise (see article "Where to now with the CDM" elsewhere in this issue). Unfortunately, the CDM transition is only one of the topics with the potential to cause further blockades and delays.

With these two main complex arguments, it is clear that the elaboration of domestic entry points for international market mechanisms is a laborious process, which is not only of interest to implementing countries, but also to countries that would like to acquire mitigation outcomes and/or are willing to contribute to the overall ambition of Article 6. Here, cooperation should be considered as part of the collaborative nature of the new mechanisms.

Market negotiation outlook 2017

It is too early to speak of potential outcomes of the Article 6 negotiations. This article stresses the need to pay attention to the available negotiation time and to address the content of regulation requirements now. There are arguments in favour of refraining from any over-estimation of the existing NDCs and to encourage implementing countries to prepare for concrete use of the Paris mechanisms. This article also warns against new blockades which arise from gambling negotiation styles. To achieve progress in UNFCCC negotiations, we need clear signals from many lighthouses who can show us where to go to create safe havens for fair and open negotiations. Only the achievement of real progress before 2018 and the global expectation of core negotiators, that carbon markets and cooperative mechanisms serve ambition-raising under the Paris Agreement, will allow for stronger political commitments.

Where to now with the CDM?

Deciding on the fate of CDM activities, credits, rules and institutions

Sandra Greiner, Climate Focus and Andrew Howard, Koru Climate

With the Paris Agreement now replacing the Kyoto Protocol as the new and universal global climate agreement, the fate of today's pipeline of Clean Development Mechanism (CDM) activities is unclear. The same is true for the sizeable stock of credits that have been issued, the methodologies approved and in use and, more generally, the standards, procedures and institutional architecture developed over the history of the CDM. With the entry into force of the Kyoto Protocol's second commitment still not in sight, it remains unknown to CDM participants until when the mechanism will continue operation and into which markets they may be able to sell their credits.

Will the CDM – or at least parts of it – transition to a new home in the emerging architecture of the Paris Agreement? The effects of this uncertainty have already been taking their toll for several years, diminishing the incentive for project developers to sustain ongoing CDM operations or invest into new ones.

Transition in the negotiations

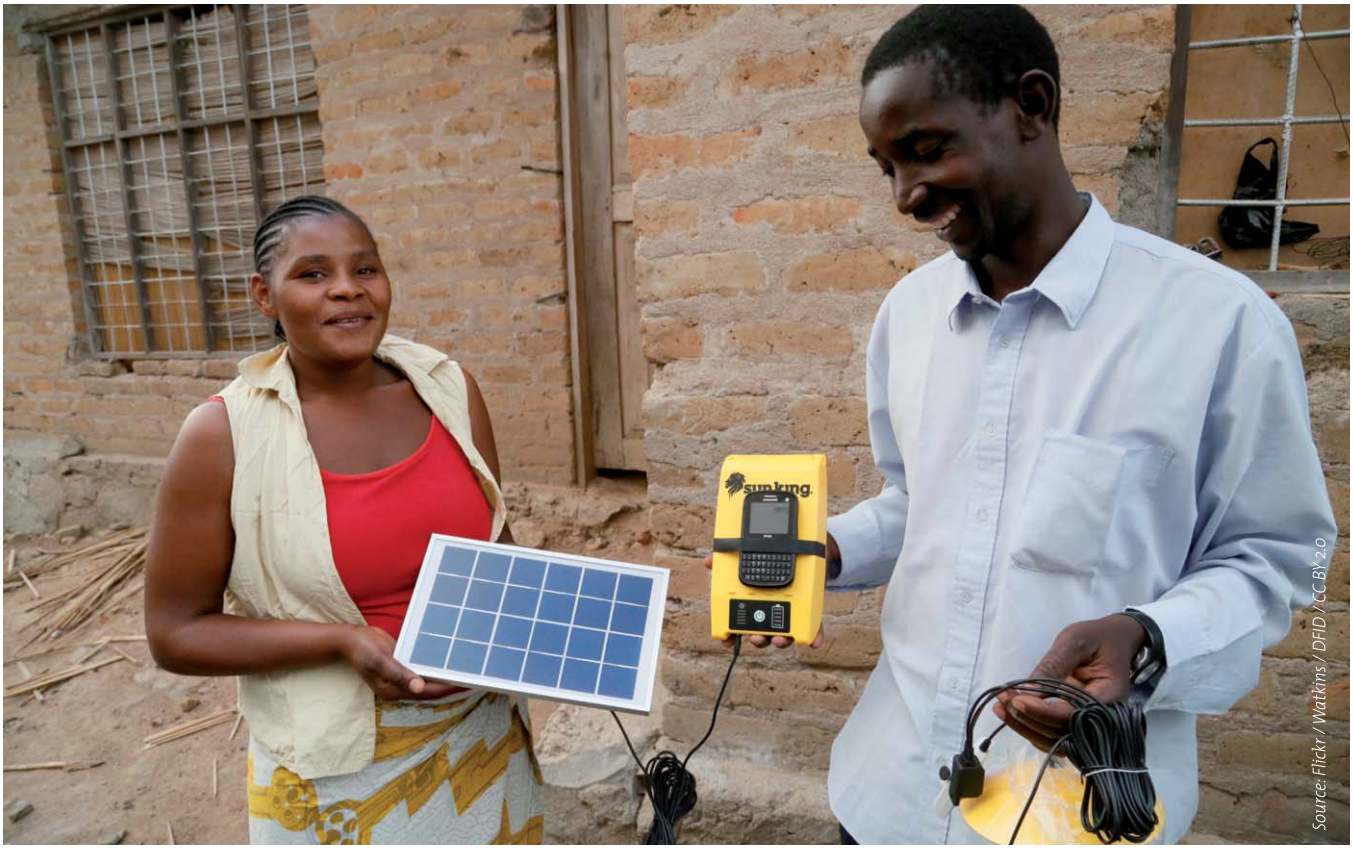
Since the Paris Agreement was adopted, momentum has been building to find a way of addressing the issue of CDM transition at the level of the UNFCCC negotiations. In the lead up to COP 22 in Marrakech last November, a good number of Parties and stakeholder organizations emphasized the need for a smooth transition between the CDM and the new crediting mechanism being established under Article 6.4 of the Paris Agreement. These include countries as diverse as Brazil, Norway and the African Group.

These discussions continued during the negotiations on Article 6.4 in Marrakech, with Parties stressing the importance of transitional issues for ensuring credibility, providing investment certainty and fast tracking the new mechanism.

Parties also sought to address this transition through the annual guidance that Parties provide to the CDM Executive Board, suggesting, for example, that the Board review the relevance of the CDM in the context of Article 6 and ensure that registered projects and carbon credits are able to transition to the new regime. While ultimately these interventions did not find consensus and make it into the conclusions of the respective sessions, it is clear that many Parties wish to further understand the options for addressing the transition and be able to gauge their implications.

Addressing the transition of the CDM faces two key difficulties in the negotiations. First, the issue is not yet well-anchored in any of the workstreams. The negotiations under the SBSTA to develop the rules of the Article 6.4 mechanism may well provide a natural home for this discussion in time, but they are currently progressing at too conceptual a level to yet address the practicalities of CDM transition. On the other hand, the negotiations on CDM reform are taking place under the auspices of the Kyoto Protocol. However, the Protocol's supreme governing body, the CMP , has no decision-making power over issues to do with the Paris Agreement, as negotiators are quick to point out whenever an attempt is made to reform the CDM with a view to it leading the way to a future mechanism under Article 6.

The second difficulty arises simply from the different views of Parties on future crediting mechanisms



What future for CDM project activities? A solar power system in Tanzania.

under the Paris Agreement. In a debate reminiscent of the long discussions on CDM reform, some countries wish to maintain the current form and structure of the CDM in the context of Article 6.4 while others wish to see significant changes in its scope, rules, governance and operationalization. Countries are still positioning themselves for the more earnest negotiations to come on this topic.

Against this background, some commentators are beginning to raise the cooperative approaches that all Parties are free to establish and have counted under Article 6.2. Countries wishing to establish their own crediting mechanisms in this way can potentially structure them on improved versions of the CDM and provide a home for CDM activities. In principle, this could also provide a route forward for the activities and ruleset that has been built up so far in the CDM.

Aspects of the debate

Parties that have raised the issue of transition are often motivated by a wish to quickly scale up mitigation action on the back of the CDM, arguing that we should not to lose the significant potential of the CDM pipeline, infrastructure and capacity already built up among governments and other stakeholders. They stress the importance of preserving the incentives for investors during the period of transition in order to keep vulnerable CDM operations running and trigger investment into new ones. Leveraging the pipeline of CDM activities and its potential for replication would be a quick and effective way to ramp up mitigation action, in line with the spirit of urgency of the Paris Agreement.

Some Parties also make the point that the Article 6.4 mechanism needs to be operationalized quickly if it is to serve new compliance market demand, such as

that anticipated from the Carbon Offset and Reduction Scheme for International Aviation (CORSIA) and from Parties seeking to enhance the ambition of their Nationally Determined Contributions (NDCs). Time is however of the essence, as these future sources of demand need clarity soon on what sort of crediting mechanisms will be available under Article 6. Transitioning relevant elements of the CDM would be an effective way of fast-tracking and guaranteeing the operationalization of the Article 6.4 mechanism.

Another motivation often cited by Parties speaking in favour of a transition path for the CDM is regulatory predictability towards CDM participants and the preservation of investor confidence in UNFCCC mechanisms, even though this has clearly already suffered. Finally, there is a need to ensure an orderly transition from the CDM to the Article 6.4 mechanism to avoid having two mechanisms with similar objectives running in parallel under the UNFCCC.

On the other side of the emerging debate, concerns are being raised as to the implications for the ambition of countries' mitigation efforts if the pipeline of CDM activities is to be integrated. Some fear that the stringency of pledges under the Paris Agreement could be undermined if CDM activities are allowed to freely transition to the Paris Agreement framework, as some of these activities may no longer require a revenue stream under the CDM or may not be additional in the context of a host country's NDC. Many Parties have reservations against allowing CDM credits from the pre-2020 period to be carried over to NDCs in the post 2020 period, given that this could lower the efforts that Parties collectively undertake to meet their Paris pledges.

Another hesitation on the side of some Parties is that provisional arrangements for the CDM in a transition period – such as allowing the CDM to be used in the context of Article 6 until the Article 6.4 mechanism has been operationalized – could de facto pre-empt key decisions on the scope and design of the mechanism and lessen pressure to give the CDM a full reform. Some Parties wish, for example, to see broader approaches implemented through Article 6.4 than have been possible through the CDM, such as those targeting sector- or economy-wide crediting activities. Others wish to ensure that the imbalances in regional distribution experienced with the CDM will be properly overcome under the Paris Agreement. Care should be taken when migrating CDM activities to the Paris Agreement in order not to perpetuate existing imbalances.

A final concern is the timing of the discussion, with some cautioning that one cannot meaningfully discuss what should be transitioned into it until the future rules of the Article 6.4 mechanism are known. This, they say, may also risk creating false expectations among investors, if positive signals are given in the negotiations today that later cannot be fulfilled.

The impacts of this timeline are not yet clear. Decisions will no doubt come in time, but delays in ramping up the Article 6.4 mechanism and unclarity on the CDM's role in it may well further supress public and private sector confidence in the CDM. The majority of projects may have already stopped operating or found a new home under voluntary standards or domestic carbon regimes.

Examining the options

Given the many valid arguments and concerns, a first step to progress in the debate is to clearly distinguish the options for transitioning the CDM, both with respect to the "what" and to the "how".

Regarding the "what", there are four elements of the CDM that could be subject to transition:

- The CDM activities themselves, that is, the pipeline of projects and programmes of activities (PoAs),
- The credits that have been issued for emissions reduced or removed,
- The CDM institutions, such as the international or domestic governance structures, the CDM registry and the Designated Operational Entities (DOEs) that verify CDM activities,

- The CDM rulebook, including the modalities and procedures of the CDM, its standards and procedures, and its body of methodologies, tools and templates.

While there are linkages among these elements, Parties could decide to transition some but not others. For example, allowing CDM activities to migrate to the Article 6.4 mechanism does not mean that elements of the CDM rulebook would have to be adopted, or vice versa. Parties could also decide to allow a migration of CDM activities but exclude the carry-over of credits that are already issued. Or they could decide that certain institutions established under the Kyoto Protocol may serve the Paris Agreement, as has been done with the Kyoto Protocol's Adaptation Fund. As for the rulebook of the CDM, Parties may opt for the transition of certain concepts, such as standardized baselines or PoAs, without adopting other aspects of the CDM's modalities and procedures.

Many permutations are possible when it comes to the "what" of the transition. One way of thinking structurally about these is to distinguish between full integration, where CDM elements are transitioned in their entirety to the Article 6.4 mechanism, versus partial integration, where certain limitations are imposed. For example, one could restrict the transition of CDM activities and credits based on eligibility criteria (e.g. projects versus PoAs, technology types, regions, or vintages of registration or issuance dates). Another way may be to apply certain conditions to the transitioning of projects and credits (e.g. discounting, maximum limits or additionality demonstrations on the basis of NDCs). Such criteria would clearly be controversial, but they may offer means to optimize the value of what is brought into the operationalization of Article 6.4 and provide a route for limiting concerns that the ambition of the Paris Agreement may be impacted.

The second question, the "how", is about the procedural options for effecting the transition. Again, a number of options exist. For the transition of CDM activities, Parties could establish eligibility criteria and a process for project participants to apply for migration to the Article 6.4 mechanism.

Numerous procedural options also exist for the transition of the institutions or elements of the rules from the CDM. The CMA could elaborate modalities and procedures for the Article 6.4 mechanism that mirror and reflect relevant CMP decisions relating to the CDM rulebook that Parties wish to maintain, with any adjustments being incorporated as necessary. Alternatively, the CMP could expressly confer power and authority over the CDM to the CMA. Going further, the CMP and the CMA could jointly decide that the CDM as a whole, or certain elements of it, should be integrated into the Paris Agreement.

The CDM Transition Initiative

While the transition of the CDM has arisen as a relevant concern in the negotiations, discussions to date have remained at a high level and many questions remain open. Against this backdrop, Climate Focus and Koru Climate have kicked off the CDM Transition Initiative, with financial support from the German and Norwegian governments.

This initiative works towards a political resolution in the UNFCCC negotiations by providing a platform for governments and stakeholders to hold a dedicated and informed dialogue on the issue. As a first step, the initiative is developing an options report that analyses the spectrum of available options for transitioning aspects of the CDM. The options report will be informed by an assessment of the types, volumes and geography of CDM activities still operational and/or in need of funding, and will take into account legal feasibility and the political context of the transition.

The initiative was launched during COP 22 in Marrakech and will continue until COP 23.

First, Do not Harm

Using crediting mechanisms for results-based climate finance: options and tools for environmental and social safeguards

by Randall Spalding-Fecher, Carbon Limits and Lambert Schneider, SEI Associate

Results-based financing (RBF) is increasingly being used as an innovative tool to effectively disburse climate finance. RBF links payments to outcomes, by disbursing funding ex-post upon the achievement of a set of pre-defined results. RBF therefore provides strong incentives for the recipients of the funding to achieve the results. The recipients have autonomy in how to achieve the results, which can create ownership and encourage innovation. At the same time, the recipients face higher risks and transaction costs, and must have access to upfront capital to be able to respond to the incentives.

Carbon market crediting mechanisms like the CDM could be considered a form of RBF, as they typically involve pay-for-performance contracts. Emission reduction credits are awarded ex-post upon third party verification of mitigation outcomes. Crediting mechanisms could thus support the application of RBF for climate change mitigation, including through the purchase and cancellation of credits or by using their tools for monitoring, reporting and verification (MRV) of mitigation outcomes.

A critical issue in designing RBF programmes for climate finance is how to ensure that adequate environmental and social safeguards are in place and are enforced. This is particularly important in light of the criticism of some carbon market projects for failing to adequately protect human rights. This article provides a brief overview of emerging practice on safeguards in the climate finance field and makes recommendations for future RBF facilities using crediting mechanisms.

Approaches for environmental and social safeguards in multilateral processess

Environmental and social safeguards are a well-established practice in bilateral and multilateral development cooperation.[1] There are several tools that multilateral funding mechanisms and facilities can use to reduce the risks of negative social and environmental impacts:

- Safeguards criteria: Almost all development and financing institutions have a list of specific environmental and social criteria (e.g. adherence to international labour standards, respect for human rights) that funded activities must meet, although they may vary in how these criteria are evaluated and how compliance is ensured. Some institutions only evaluate the criteria at the start of the programmes; others also assess their adherence after implementation.
- Monitoring and verification of compliance with safeguards: Compliance with safeguards or other criteria may be evaluated by the two parties involved (i.e. the funder and the recipient), or it may involve verification by a third party, often with accreditation required specific to that financing mechanism.
- Stakeholder consultation: Although most mechanisms and institutions require consultation with interested and affected stakeholders, the exact scope, process and con-

1 Environmental and social safeguards in this context covers all of the relevant environmental, health, economic, social, safety, and human rights issues that could be affected by development projects. The precise scope of safeguards depends on the policies of the funding agency or mechanism. The safeguards may be codified in organizational policies, procedures or standards.

tent of this consultation varies, and may or may not be specified.

- Mechanisms for conflict resolution: Several institutions provide for different types of mechanisms to address conflicts. This could include an ombudsman, who would investigate complaints and attempt to resolve them, usually through recommendations or mediation, or an appeals process that would give stakeholders a formal process to request a change to a decision.
- Mechanisms to facilitate redress: Few institutions have established mechanisms for redress. Such mechanisms could include a reserve (either in monetary terms or emission reduction credits) that is set aside to compensate negatively affected local stakeholders, or liability provisions that specify which parties are liable for any unintended negative impacts.
- Environmental and Social Impact Assessments (EIA/ESIA): Programmes may simply rely on national law for EIAs and ESIAs, or impose additional requirements beyond national law (e.g. requiring an EIA for an activity that does not require it under national law, or providing guidance on the content of the EIA).

Table 1 below illustrates the application of these tools by some of the important financing mechanisms. Interestingly, while the CDM as a mechanism does not have safeguards criteria (except for CCS projects), funding facilities applying an RBF approach using CDM (e.g. Ci-DEV, PAF)[2] do apply safeguard criteria. Third party verification of safeguards and conflict resolution mechanisms is the exception and not the rule, as are

Table 1: Tools for managing environmental and social risks in climate finance

Instrument	Safeguards criteria		Third party verification of safeguards		Stakeholder consultation	Mechnisms for redress	Conflict resolution mechnisms	EIA/ESIA by national law	EIA/ESIA beyond national law
	Ex-ante	Ex-post	Ex-Ante	Ex-post					
PAF	✓	✓		✓?	✓			✓	?
Ci-Dev	✓	✓			✓			✓	
EnDEV (RBF)	✓				✓			✓	
GET FiT	✓							✓	
FCPF	✓	✓			✓	✓		✓	✓*
NIFCI	✓				✓			✓	
GCF	✓	?	***		✓		✓**	✓	?
REDD+	✓	✓	?	?	✓		?	✓	?

Note: Ex-ante means that criteria are evaluated at the inception (or prior to the inception) of a project, while ex-post means that ongoing evaluation is conducted after implementation. *A Strategic Environmental and Social Assessment is required, beyond a project-level EIA or ESIA. **The GCF is using the IFC compliance mechanism in the interim, but plans to have its own compliance mechanism and ombudsman. ***GCF assesses the implementing entities' capacity to evaluate the safeguards, but there is no third party verification outside of the implementing entity. PAF=Pilot Auction Facility; Ci-Dev=Carbon Initiative for Development; EnDEV (RBF)=Energy for Development (Results Based Financing); GET FiT=Global Energy Transfer Feed-in Tariffs (Uganda); FCPF=Forestry Carbon Partnership Facility; NIFCI=Norway's International Climate and Forest Initiative; GCF=Green Climate Fund; REDD=Reduced Emissions for Deforestation and Degradation.

2 *See note under Table 1 for the acronyms for all of the financing facilities.*
3 *Decisions of the Board – Tenth Meeting of the Board, 6-9 July 2015 (GCF/B.10/17), Annex VII: Terms of reference of the Head of the Independent Redress Mechanism*

requirements to go beyond any national EIA or ESIA regulations. The GCF may constitute an extension of these trends, given that it will have mechanisms for redress and appeals[3], as well as safeguards (initially from the IFC but eventually customised to the GCF). However, it is not yet clear whether any third-party verification will be required, or how the safeguards may be assessed on an ongoing basis. Given that the GCF will work largely through intermediaries, the GCF Board will only address these issues when accrediting an entity to the GCF – in other words, by assessing the institution's capacity to implement the safeguards policies. It is unlikely that the GCF will directly review the safeguards compliance of individual funded activities.

Table 2 provides an overview of what safeguards criteria different mechanisms apply, and how that is related to results-based payments. The IFC Performance Standard has become the de facto global safeguards standard for financing in the private sector.[4] The World Bank, and therefore funds or facilities based at the World Bank, use the World Bank Performance Standard for all funding to the private sector, which is the same as the IFC Performance Standard. However, for lending to public sector entities, the World Bank uses the World Bank Safeguards Policies. The World Bank Safeguards Policies largely cover the same areas as the Performance Standards, although they do not have dedicated provisions on labour or "community health, safety and security". These issues are mentioned in the overall framework for environmental assessment (i.e. Operational Policy 4.01 on Environmental Assessment), but do not have the level of detail that the Performance Standard does.[5] Table 2 shows that a number of mechanisms use the World Bank Group performance standards for funding to the private sector, including programmes not based at the World Bank, whereas some others use their own criteria.

Measurement is generally qualitative and carried out internally. The PAF links compliance with environmental and social criteria to payments, as do the REDD+ mechanisms. The GCF Board decisions do not yet state how violation of safeguards could affect payments or liability, although this is presumably part of the development of the compliance mechanism.

Protecting human rights has gained particular importance and attention in both development cooperation and addressing climate change. In decision 1/CP.21, which adopts the Paris Agreement, Parties acknowledge that they "should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity". Similarly, a recent review of safeguards at all the major multilateral development banks noted that none of these institutions (other than the European Investment Bank) have a "cross-cutting policy requiring 'human rights' compliance. Most of the other MDBs refer to 'human rights' in supportive aspirational terms while recognizing the responsibility of clients to respect human rights".[7]

Another challenge with safeguards across the multilateral development banks – and implicitly, for the facilities that utilize these tools – however, is not related to the scope and definition of the criteria, but their practical application by the implementing agencies and the assessment of compliance by the staff of funding institutions. For example, the Office of the Compliance Advisor Ombudsman (CAO), which serves the International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA), has conducted audits of IFC investments in Indonesia and Honduras that found that the IFC staff did not adequately address safeguards issues, systematically underestimated risks, and were under pressure to move loans rather than to ensure that safeguards were met.[8] NGO comments on the revision of the World Bank safeguards have also highlighted insufficient enforcement of these safeguards in practice, as well as shortcoming in their scope.[9]

4 *GCF. 2014. "Relevant International Private Sector Best-Practice Fiduciary Principles and Standards and Environmental and Social Safeguards. GCF/B.08/05." Songdo, Republic of Korea: Green Climate Fund. http://www.gcfund.org/fileadmin/00_customer/documents/MOB201410-8th/GCF_B.08_05_Private_Sector_Best_Practices_fin_20141007.pdf.*

5 *The World Bank safeguards policies have been under review since 2012, and are currently entering their third round of consultation. See http://www.worldbank.org/en/news/feature/2015/08/11/the-long-road-toward-consensus-on-safeguards.*

7 *Himberg, Harvey. 2015. "Comparative Review of Multilateral Development Bank Safeguard Systems." – including comment that, "The World Bank only refers to 'human rights' in OP 4.10, Indigenous Peoples".*

8 *CAO. 2009. "CAO Audit of IFC's Investments in: Wilmar Trading (IFC No. 20348), Delta–Wilmar CIS (IFC No. 24644), Wilmar WCap (IFC No. 25532), Delta–Wilmar CIS Expansion (IFC No. 26271)." Washington, D. C.: Compliance Advisor Ombudsman. http://www.cao-ombudsman.org/uploads/case_documents/Combined%20Document%201_2_3_4_5_6_7.pdf. CAO 2013. "CAO Audit of IFC Investment in Corporación Dinant S.A. de C.V., Honduras." Washington, D. C.: Compliance Advisor Ombudsman. http://www.cao-ombudsman.org/cases/document-links/documents/DinantAuditCAORefC-I-R9-Y12-F161_ENG.pdf*

9 *http://www.safeguardcomments.org/*

Table 2: Safeguards criteria and link to payments for selected mechanisms

Instrument	Safeguard Criteria	Measurement	Linked to payments? [6]
PAF	Customised for each project, but derived from World Bank Performance Standard	Qualitative assessment by special WB staff	Yes
Ci-DEV	World Bank Performance Standard	Qualitative assessment by special WB staff	No
EnDev	Qualitative assessment of environmental risks conducted by implementation agency (GIZ)	Qualitative assessment	No
GET FiT	IFC Performance Standard	Not known	No
FCPF	World Bank Performance Standard	Qualitative assessment by special WB staff	Yes
NIFCI	Customized for each bilateral agreement, but based on international standards, including fiduciary, governance, environmental, and social safeguards – may include additional criteria beyond these standards	Not known	No
GCF	Implementing entities must ensure compliance of funded activities with environmental and social safeguards (interim use of the IFC performance standard, which is the same as the World Bank Performance Standard)	GCF checks the implementing entities' capacity to ensure compliance with this standard	To be decided
REDD+	A range of criteria including: compliance with national and international agreements, respect for indigenous knowledge, conservation, as well as typical international safeguards	No process defined yet Upfront as well as ongoing reporting	Yes

Note: for acronyms, see note below Table 1.
[6] In other words, for an approved project, could the results-based payment be withheld because of non-compliance with safeguards after the start of implementation (as opposed to an ex-ante evaluation of whether the safeguards are met)?

Another example are concerns that have been raised by journalists regarding more than 3.3 million people displaced between 2013 and 2014 allegedly because of World Bank funded programmes, despite safeguard policies on involuntary resettlement. [10]

In terms of stakeholder consultation, the experience of the CDM shows the importance of allowing for stakeholder consultation and providing clear guidance on the process for stakeholder consultation. The rules governing stakeholder consultation under CDM have been improved over time, based on practical experience input from stakeholders. Guidance includes which stakeholders should be involved and how their comments should be invited and addressed. The CDM Executive Board also agreed to provide the possibility for stakeholders to raise concerns at the first verification of projects, which may allow stakeholders to follow up on commitments made during project development or in the project design documents that do not relate directly to GHG emissions reductions.

10 http://projects.huffingtonpost.com/worldbank-evicted-abandoned

Recommendations on safeguards for results-based financing for mitigation – starting a "race to the top"

The available experience with environmental and social safeguards suggests that the main deficits do not lay with the definition and criteria used, but how, when and by whom these criteria should be evaluated. The main feature distinguishing RBF from other forms of climate finance is the ex-post payment upon achievement of agreed objectives. This feature provides an opportunity to increase the effectiveness of environmental and social safeguards by making results-based payments contingent to the compliance with such safeguards. The following options should be considered when designing RBF programmes:

Safeguards criteria: RBF programmes using crediting mechanisms should draw upon existing standards. There are several robust performance standards available, and the GCF is currently looking at developing its own standard. Safeguards should also include explicit provisions for protecting human rights as part of the overall safeguards policies.

Monitoring and verification of compliance with safeguards: RBF programmes should have third-party ex-post verification of safeguards as part of their monitoring programme. If safeguard criteria are only evaluated internally and not verified, it may limit the effectiveness and transparency of the process. In fact, the larger funding mechanisms grow, the more important third-party verification by accredited entities becomes. Verification can only be carried out effectively after project implementation and would need to be repeated regularly, together with the verification of mitigation outcomes. Verification of safeguards could be conducted by specialized auditors which are accredited and whose performance is assessed, such as Designated Operational Entities (DOEs) under the CDM. These auditors could also be contracted by the overall RBF programme, rather than by individual project developers, to prevent the potential conflict of interest if auditors are hired by the project owner.

RBF programmes may need to clarify how to address contravening one of the criteria after implementation. This would include who could raise an objection, how potential violations of criteria would be assessed, and what remedies would be applied. This could also include withholding results-based payments until the criteria are again fully met. If safeguards are to be included in RBF payment contracts, they will require clear "triggers" that can be objectively evaluated and included in the legal and contractual agreements.

While the same general safeguards criteria would presumably apply across all sectors and technologies, the process and specific indicators for assessing safeguards could vary by technology or project type. Such a "risk-based approach" would consider what types of impacts were more or less likely for certain project types. For example, a technology such as N2O reduction in nitric acid production does not involve changes in land use, or additional discharges of water or air, so it may not be necessary to evaluate these safeguards criteria for such projects.

Stakeholder consultation: RBF programmes should ensure that stakeholders can provide comments both prior to the implementation of the funded activities and during their operation, and this should be reviewed as part of the auditing process.

Mechanisms for conflict resolution and to facilitate redress: In case safeguards are not met, or unanticipated conflicts occur after implementation, RBF programmes should have mechanisms to resolve conflicts and, where necessary, compensate those who have been negatively impacted by the programme.

Environmental and Social Impact Assessments (EIA/ESIA): Going beyond relying solely on national law for social and environmental impact assessments may be considered for RBF programmes for two reasons. Firstly, the broad scope of RBF interventions may lend itself more to a what is called a

Delivering results: Rural electrification in Bhutan.

"strategic environmental and social assessment" (SESA)[11], which would not normally be required by national law. In addition, because of the international nature of the funding and the overall commitment in the UNFCCC to human rights and other issues, it is important to ensure that for activities with considerable environmental and social risks, the necessary and comprehensive evaluation of impacts is conducted regardless of whether it would be required under national law.

With the rules for various cooperative mechanisms under the Paris Agreement currently under discussion, and the number and size of climate finance facilities expanding, now is a critical time for renewed discussion on safeguards and consideration of minimum standards – both across different crediting mechanisms but also more broadly across the UN and other multilateral funding facilities. Starting early also provides the opportunity to test different approaches for how to monitor compliance with safeguards, how to address conflicts, and how to adapt the safeguards process to the needs of specific countries, sectors and technologies.

11 To paraphrase World Bank guidelines, SESA is a family of approaches that lie on a continuum. At one end, the focus is on impact analysis, at the other end, on institutional assessment. SESA would incorporate environmental and social considerations across different levels of strategic decision-making: plan, program, and policy.

Supporting Action

The Partnership for Market Readiness in a post-Paris World

by Maja Murisic and Adrien de Bassompierre, The World Bank Group

December 2015 represented an important milestone in the global effort to tackle climate change, with the Paris Agreement being reached and demonstrating a strong commitment to keep the increase in global average temperature to well below 2°C above pre-industrial levels, with the aim of limiting it to 1.5°C.

In addition to representing a major step forward in raising the collective ambition, the Paris Agreement was also unique in the way in which it encouraged all countries to make individual, nationally-driven commitments to contribute to the global effort. In fact, as part of the process leading up to the Paris Agreement, more than 180 countries submitted their pledges, laying out the actions they will take to reduce greenhouse gas (GHG) emissions and adapt to the changing climate through their Nationally Determined Contributions (NDCs). The bottom-up nature of the Agreement offered countries a high degree of flexibility regarding the policy instruments and measures to be taken, based on their overall development and strategic priorities. To this end, many of them also emphasized the possibility of using carbon pricing measures and carbon markets to ensure that GHG emission reductions targets outlined in their NDCs are achieved.

The Paris Agreement also recognized the importance of voluntary cooperative approaches and, therefore, paved a way for a renewed international carbon market to emerge in the future. In particular, through its Article 6, the Paris Agreement provided a basis for two concepts to be used when pursuing such cooperation – through the establishment of a new international mechanism, which would contribute to GHG emissions mitigation and sustainable development, as well as through the provisions based on which countries could use internationally transferred mitigation outcomes (ITMOs) to meet their climate pledges.

The Partnership for Market Readiness (PMR), which is a collective initiative to help countries assess, design, prepare and implement carbon pricing instruments to reduce GHG emissions, has been delivering results in this space since 2011. In a post-Paris world, the mandate of the PMR has been reinforced. Indeed, the experience gained through PMR activities in different countries, to better understand and test the use of carbon pricing in order to achieve climate change mitigation objectives, provide a solid foundation for future carbon market developments. Such insights will be critical to achieving the collective ambition of the Paris Agreement.

The PMR at a Glance

- the initiative covers 36 national and sub-national jurisdictions, and the European Union
- 19 Implementing Country Participants, 13 Contributing Participants, and 4 Technical Partners
- Total capitalization of $127 million
- 15 countries have completed road maps for carbon pricing readiness
- $59 million allocated to governments to implement readiness activities
- More than 15 Technical Notes, 40 Technical Workshops and other events, and a growing body of knowledge on carbon pricing instruments and their technical underpinnings

Find out more at: www.thepmr.org

Improving market readiness: A mini hydro power project in Sri Lanka, a new PMR implementing country.

PMR countries' perspective: Increasing demand to support the operationalization of NDCs

In the years to come, as countries face a number challenges to translate their international commitments into their low-carbon and climate-resilient development plans, the role that initiatives such as the PMR will play is likely to become even more critical. In the same way, it is reasonable to assume that there will be an increase in demand from countries to help them refine and operationalize their NDC objectives and implementation strategies, including through the use of market-based and other carbon pricing instruments.

While implementation of NDCs will rely on a range of policies and programs, about 100 Parties —accounting for 58 percent of global GHG emissions — indicated that they plan or consider to use carbon markets and carbon pricing instruments in the future. Already, about 40 national jurisdictions and over 20 cities, states, and regions are putting a price on carbon, which translates to a total coverage of around 7 gigatonnes of CO_2 equivalent, or about 13 percent of global GHG emissions. Furthermore, through a recent modeling analysis carried out by the World Bank, it was demonstrated that an international carbon market could reduce the cost of delivering the emission reductions identified in the NDCs by one third by 2030 and that, by the middle of the century, it would have the potential to reduce global mitigation costs by as much as 50 percent.

The implementation of carbon pricing instruments can generate a "triple dividend:" it is good for the environment, an efficient way to raise revenue, and a driver for innovation and critically-needed investments in clean and low-emission technologies. However, even though these benefits are widely recognized and the pace at which the carbon pricing initiatives around the world are being introduced is faster than ever, the challenges that countries face when preparing for and implementing various carbon pricing instruments should not to be underestimated.

To this end, the PMR experience shows that readiness for carbon pricing cannot be considered in a uniform and simplistic way. Overall, the PMR countries are leading by example in pursuing innovative ways for scaling up their GHG mitigation policies and actions. That said, it is important to note that there is a number of countries that are still at the intial assessment and decision-making stage regarding the future choice of the carbon pricing instrument. In some other cases, the PMR countries' readiness activities relate to building technical and institutional capacity for the design phase of the instrument. And lastly, there are also countries that are pursuing readiness activities that address implementation challenges in regard to the instrument review and refinement. This diversity implies a need for a different type of support that countries are also likely to have in the future, depending on the readiness stage they are at.

The PMR countries' experience also demonstrates that building carbon pricing readiness is a "no-regrets" measure, as improvements in technical and institutional capacity have cross-cutting benefits that support domestic climate change policies and low-carbon and resilient growth. An example of the approach of maximizing benefits and minimizing regrets is the PMR support to crediting-related activities which have a broad applicability for almost all policy instruments, and most notably in the areas of data management, MRV and capacity development.

"The PMR has been instrumental in advancing the debate on the role that carbon pricing instruments will have in Chile by supporting our efforts to implement the carbon tax and build the required MRV infrastructure. At the same time, and given that the Paris Agreement - which has already been ratified by the National Congress in Chile - opens a significant space for cooperation between Parties to enhance mitigation through the use of market instruments, the PMR also allows us to be prepared for these arising opportunities. Going forward, we hope that we will be able to build on the ongoing analytical work and further explore how we could potentially move towards the design of a more comprehensive instrument, such as an ETS."

Juan Pedro Searle, Ministry of Energy, Chile

Moreover, the PMR countries' experience shows the importance of technical and policy foundations for advancing the design and implementation of carbon pricing instruments. This includes the promotion of good practice and the facilitation of efforts to establish common standards and approaches for GHG mitigation, as well as economic and policy analysis to inform the selection and introduction of a carbon pricing instrument, as well as its future revisions and refinement.

"The PMR has so far given valuable support to countries in exploring the right policy option for carbon pricing while taking into account the national circumstances. We consider putting a price on GHG emissions as a key set of instruments in the tool box for implementing the NDCs and achieving countries' long-term goals. To date, 13% of global GHG emissions are covered by a carbon price. In 2017, three PMR countries – China, Chile, and South Africa - will enforce new nationwide carbon pricing instruments. Thus, the percentage of emissions covered globally will be doubled. This is very encouraging, and the work of the PMR has considerably contributed to this development. However, to tackle climate change globally in an efficient way, we need to further increase the coverage and to strengthen the existing instruments. In a second phase of the PMR support program, it is important to strengthen the link between the chosen carbon pricing instrument(s) and the individual country's NDC and its long-term goal, to align climate-related national policies and programmes, and to foster cooperation among countries enabling to raise ambitions. Thus, we still recognize the need for deepening and broadening the support to countries in developing carbon pricing instruments after 2020."

Malin Ahlberg, BMUB

Finally, the partnership aspect of the PMR proved to be very beneficial for the countries by offering them a platform to leverage political momentum and share valuable knowledge on technical and policy challenges faced during the design and implementation of carbon pricing and market-based instruments. By bringing together more than 30 countries and the world's major economies and largest emitters, various international organizations and technical experts, the PMR enables enhanced cooperation and innovation.

The way forward: Meeting growing demand for technical assistance

Recent global developments reinforced the PMR's current mandate and its future relevance. On one hand, the Paris Agreement created an environment which is conducive to the use of domestic carbon pricing instruments that many of the PMR countries are pursuing. On the other hand, the insights gained from the implementation of the PMR activities demonstrated that support for building institutional and technical carbon pricing readiness is going to remain critical in the future.

With that in mind, and leveraging and expanding on its past work, the PMR has already undertaken a number of actions aimed at ensuring that its impacts are maximized over time. They include efforts to enhance technical and financial support to countries including through a provision to open a window for countries to apply for additional funding to complement the existing activities under specific country programs or engage in the policy analysis- and modeling-related activities. Part of these efforts also includes a process to broaden the reach and welcome additional Implementing Country Participants, with Sri Lanka and Argentina being the latest additions to the Partnership. The PMR Technical and Policy Work programs have also seen significant growth covering a number of topics—from various design and implementation issues around emissions trading systems (ETSs), carbon taxes, and scaled-up crediting instruments to underlying technical components. Much of this growth in knowledge generation and related impact was made possible through a close collaboration with a number of partners.

After concluding the first round of discussions on the strategic orientation of the PMR and the endorsing the ways of enhancing the current implementation modalities and its reach, the PMR has also collectively engaged in discussions on how to best ensure that its impacts are sustained over time and, in particular, after the current operational phase ends (beyond 2020). While these discussions are at the early stage, some ideas about the second phase of the PMR have already emerged. For instance, there is a general consensus that the proposed focus for the next phase of the PMR would be to step up the support provided to countries and, therefore, help them move from the readiness stage to the implementation of fully-fledged carbon pricing and market-based instruments – all in the context of the NDC implementation. Moreover, in addition to the current focus on emissions trading, carbon taxation and crediting/offsetting, the existing PMR activities and knowledge and experience base would also provide a good basis for an increased focus on the activities supporting the next generation of international carbon markets in the future. With a number of dedicated consultations already scheduled, the detailed proposal on how to best leverage the existing PMR experience and ensure the continuous support to countries to help them step up their action is expected to be finalized in 2018.

While the growing demand for country support remains certain, the imperative will be to ensure coordination and complementarity among all existing and forthcoming initiatives and ultimately facilitate timely, efficient and streamlined implementation of carbon pricing policies around the world.

Quo Vadis Voluntary Markets?

New Paris Agreement architecture puts business model to the test

by Lukas Hermwille and Christof Arens

The Paris Agreement (PA) has opened a window of opportunity for the development of new market-based instruments, but at the same time it challenges the global carbon markets as we knew them in the past: Under the Kyoto Protocol, only developed countries faced formal mitigation obligations while under the PA, all countries are obliged to develop and communicate nationally determined contributions. This change especially affects the voluntary carbon crediting schemes (see box), as their business model largely depends on importing emissions reductions from developing countries with no reduction obligations into the capped environments of industrialized countries.

State of play

Historically, the market for carbon units under international standards such as CDM & JI has dwarfed the voluntary carbon credit supply. Only in recent years, after CER prices collapsed, has voluntary supply gained shares.

In 2015, a total 84.1 million tonnes of CO2e were bought for voluntary purposes on international markets. This is an increase of 10 per cent against 2014 levels. However, due to falling average prices, the total market value fell by 7 per cent to USD 278 million. A total of carbon credits to the amount of 42 million tonnes of CO2e were issued in 2015 and 39.5 million credits were retired. Cumulatively, privately organized carbon schemes have credited emission reductions of 329.8 million tonnes CO2e, nearly half of which have been retired. [1]

Challenges

The Paris Agreement for the first time obligates all signatories to set themselves climate change mitigation goals. This is the decisive difference to the Kyoto Protocol, which was characterized by a "capped" and an "uncapped" environment, with caps being imposed for developed countries included in the UNFCCC's Annex I only while developing countries (Non-Annex I) did not take on commitments.

Voluntary Demand and Supply: The changing structure of global carbon markets

The "voluntary market" was originally defined in contrast to the "compliance market". Voluntary supply was provided by privately organized carbon crediting schemes supplying mitigation units to private buyers from industrialized countries. In contrast to the compliance market, where supply was regulated and under international oversight (CDM and JI), buyers on the voluntary market do not have emissions reductions obligations (such as a cap under the EU emissions trading system, EU ETS) and intend to compensate their carbon footprint for ethical reasons or reasons of corporate social responsibility.

The global carbon market has seen considerable fragmentation in recent years. Therefore, this clear cut distinction between voluntary market and compliance market does not longer hold: public entities including some states have purchased carbon credits voluntarily above and beyond their obligations under international law. Also, some emerging mandatory emission trading or offset schemes are contemplating to make units from private crediting schemes eligible. In theory, voluntary supply could even play a role in facilitating international "cooperative approaches" under the Paris Agreement's Article 6.

Under the Kyoto Protocol, the majority of credits (both for compliance as well as for voluntary cancelation) were "mined"

[1] *Kelley Hamrick and Allie Goldstein, 'Raising Ambition: State of the Voluntary Carbon Markets 2016'.*

in countries without mitigation obligations. The host countries did not have any interest in attributing the realized emission reductions to their national climate policies and including them in their own GHG inventories. However, they had an interest in attracting investments in low-carbon technologies from industrialized countries. Both the CDM as well as various voluntary carbon standards helped to channel such investments.

In developed countries, for each certified reduction in a project-based mechanism, one of the host countries Kyoto-allowance would have to be converted as under JI or cancelled as practice in most voluntary crediting schemes.

This situation has fundamentally changed under the Paris Agreement: former host countries without mitigation commitments now face an obligation to reduce emissions themselves. They therefore have an incentive to keep as many emission reductions as possible in their own books. This is particularly true for low cost emission reduction potentials.

Yet some countries have limited their mitigation activities under the PA to some sectors and excluded others. Roughly one third of the countries that specified a GHG target limit this target to a subset of their economy, 12 countries have economy-wide targets excluding only the land use and forestry sector, and 8 countries did not specify the sectoral scope of their target.

Theoretically, the "mining" of carbon credits could therefore be continued in those sectors that fall outside the scope of what is covered by the NDCs. However, the remaining "mining claim" is much reduced.

For the vast majority of mitigation potentials, voluntary carbon standards face a serious challenge. Either they could continue to certify projects without formal acknowledgement and recognition of the host country. Any emission reduction achieved under the scope of a countries NDC would materialize in the host country's GHG inventory, provided the inventory's methodologies are of sufficient accuracy and granularity, and contribute to the attainment of that country's mitigation goal.

Therefore, transferring carbon credits from projects without a formal recognition in the host country's GHG balance sheet, would necessarily result in double counting. Emission reductions would be claimed by a private entity that ends up buying the voluntary credits and by the host country of the credited activity.

One solution would be to devise a system that allows to transparently track and account transferred carbon credits. Under such a registry, it would be theoretically possible to balance the accounts of the host country of the activity and the country of residence of the entity that purchases and ultimately retires the credit. Such a registry would work most effectively and most economically centrally organized and under international oversight.

Another possibility to track transfers and address double counting would be to require all countries to transparently report on their exported and imported credits, including those of the voluntary carbon market. These reports, which could be submitted together with the national inventories, would allow to double check all transfers.

However, both solutions will have to be implemented at the international level by ensuring equal conditions for all countries participating in these transfers.

Conclusion

If it wants to remain credible, the voluntary market must prepare to become part of the Paris architecture. Voluntary certification schemes will have to make sure that Parties report on the certificates transferred or set up an international registry that allows to track these transfers.

An alternative route for the suppliers of the voluntary markets is discussed inter alia by the Gold Standard Foundation. The idea would be to shift the business model from providing an offset scheme to a labelling scheme in which high-quality mitigation activities are certified including a quantification of the achieved emission reductions. Yet these reductions must not be used to consolidate the emissions account of whoever purchases the certificates.

A new JIKO Policy Briefs give a more detailed account of the "Identity Crisis" of voluntary carbon markets:

www.carbon-mechanisms.de/en/voluntary_market

Putting a Price on Carbon in the Caribbean

Introducing the Caribbean Carbon Pricing Initiative (CCPI)

by Dr. Deborah Cornland, Cornland International; Dr. Peter Pembleton, Carbonergy BCS, and Gary Clyne, Carbon Asset Developer Associates

The Caribbean nation states are well-positioned to make a transformational shift toward low-carbon development, but lack the investment capital required to do so. The idea of a Caribbean carbon market (CCM) was originally mooted within the Energy Chamber of Trinidad and Tobago (ECTT), an energy sector NGO, representing the oil, gas, petrochemical and heavy industrial sectors in 2014. The idea stemmed from a search for a way to monetize the carbon offset potential of the Petrotrin Oil Fields Associated Gas Recovery and Utilization Programme of Activities (Petrotrin PoA) registered under the Clean Development Mechanism (CDM), given the crash of the international market for carbon credits.[1] ECTT's Board of Directors subsequently approved the concept of a CCM and continued to examine issues related to establishing such a mechanism, but by the end of 2015 no concrete actions had been taken to make the transition from idea to reality.

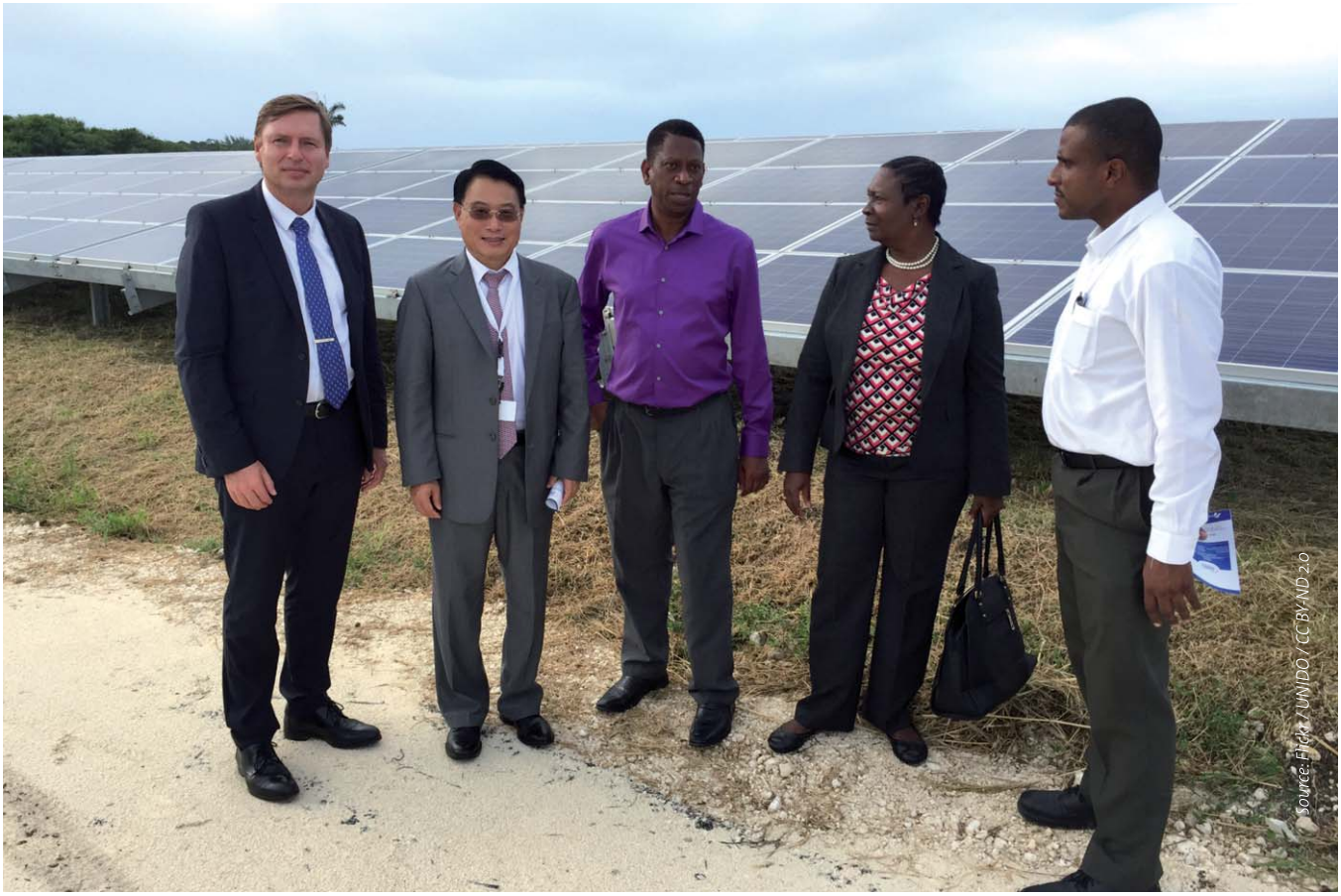
Early in 2016, the ECTT initiated discussions with Cornland International (CI) and Carbonergy BCS (CBCS) on possible next steps to elaborate upon the idea of a Caribbean carbon market utilizing their wide and lengthy experience and the carbon crediting platforms they previously developed, i.e. the Petrotrin PoA, and the complementary RE2Grid PoA for greenfield renewable energy investments.[2]

A five-year plan for designing, developing and launching a Caribbean Carbon Market (CCM) was prepared in 2016. As part of this process, the UNFCCC Regional Collaboration Centre (RCC) St. George's and regional experts were approached for support. A one-year funding proposal for an initial phase was subsequently submitted to the U.S. Bureau of Land Management (BLM) and is awaiting their decision. Recently, following discussions with donors, the effort has been renamed the 'Caribbean Carbon Pricing Initiative' (CCPI) to reflect the need for flexibility in its design.

The CCPI is intended to put a price on carbon emissions in the Caribbean and generate capital for renewable energy and methane-emission-reduction investments, to transform the region's energy sector. The CCPI envisages the development of a voluntary market-based mechanism that aims to provide finance for investment in climate mitigation activities in the region and carbon offset opportunities for investors; i.e. it will be a new cooperative approach that facilitates upfront 'carbon finance' for the mitigation efforts rather than paying for carbon credits after the fact.

The activities envisaged will address international concerns for reducing greenhouse-gas emissions as described in the Paris Agreement under the UNFCCC,

1 *http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/PI8K1FKKZH13FMHSHDP1RTGFA7FE6X/view.html*
2 *http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/FXNQIXUMQOETGJ4DJKIPJSFLMP79QR/view.html*



First steps towards a low-carbon Carribean: The Trent Solar Farm in Barbados

which supports the international exchange of carbon credits as a vehicle for countries that ratified the Agreement to cost-effectively comply with their commitments under their Nationally Determined Contributions (NDCs). In particular, the Initiative adopts the concept of international "cooperative approaches" defined in Article 6 of the Agreement, which states that "The use of internationally transferred mitigation outcomes (ITMOs) to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties." [3]

In the Intended NDCs of 14 member countries of the Caribbean Community (CARICOM) all but one stated that the commitments made thereunder were, to varying extent, conditional upon receipt of international support while the other country stated they would nevertheless appreciate such support.[4] International support would, in part, be channelled through Nationally Appropriate Mitigation Actions (NAMAs) that, as government-driven initiatives, will primarily support the development of an enabling environment for mitigation actions. Nine of the 14 countries are already developing NAMAs. However, private sector 'pathways' to carbon finance will be required.[5] Donor funding (e.g. through NAMAs) will not support the scale of investment required, especially for new power generation capacity from renew-

3 *https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf*
4 *Monserrat, being a British Overseas Territory, is not a Party to the UNFCCC and hence did not submit an INDC*
5 *PoAs are widely considered to be a suitable vehicle to generate carbon credits as a type of ITMO because of the stringent system of monitoring, reporting and verification which would otherwise have to be newly-established for accounting of ITMOs*

able energy sources, and it is highly unlikely that private sector support will be provided without investors / partners in the activity expecting a share of the mitigation outcomes (aka offsets or carbon credits). Interestingly, all but one of the 14 countries stated that they would consider using carbon market mechanisms implying that they are envisage the transfer of mitigation outcomes.

Therefore, should international support be forthcoming to support mitigation actions in the region, some will certainly be tied to NAMAs and the national INDCs, but a major share will need to be channelled to investors, whether these are in the form of a newly defined 'carbon currency' under Article 6 of the Paris Agreement or existing transferable units (e.g. CERs from CDM projects or PoAs). Considering that the specifics of ITMOs and other possible vehicles for transferring mitigation outcomes to partners in mitigation actions have not yet been decided, it remains to be seen exactly how these components of the Paris Agreement will be synchronized in future. The reader may wish to look into Japan's Joint Crediting Mechanism for an idea of how ITMOs may be handled through bilateral mechanisms.

Under the CCPI, demand for mitigation outcomes is expected to be primarily driven by large-scale fossil-fuel-industry emitters operating in the region that have already expressed an interest in the CCPI, in the USA, and in other interested countries. The potential for low-carbon development in Caribbean and neighbouring countries creates opportunities to supply those outcomes that could inter alia be generated through the two PoAs or other internationally-accepted new vehicles that are able to sufficiently account for the generation and transfer of mitigation outcomes. However, as mentioned above, to harness this potential the pricing and crediting mechanisms under the CCPI will have to address some of the key weaknesses of the CDM, not least of which is the need to generate investment capital rather than revenue. To assist with the transfer of ITMOs, the CCPI envisages linking up with existing regional carbon markets (e.g. the California Air Resources Board, Regional Greenhouse Gas Initiative, Western Climate Initiative and Mexico's cap-and-trade market).

By providing carbon finance to Caribbean nations the CCPI will promote investment in renewable energy and methane-reduction measures, thereby strengthening the economies of, and sustainable development in, the region. Helping to 'set a price on carbon' emissions in the Caribbean will:

- Facilitate transformational change in the way energy services are provided in the Caribbean and the greening of the Caribbean energy sector;
- Generate ITMOs from and link with foreign carbon markets and, potentially, with national and sub-national cap-and-trade carbon markets;
- Strengthen the economies of, and sustainable development in, Caribbean states and dependent territories; and
- Increase the overall mitigation of global greenhouse-gas emissions.

Establishing the Caribbean Carbon Pricing Initiative is intended to provide the capital needed to set the Caribbean solidly on a low-carbon development path.

Stakeholders

The oil and gas companies operating in the USA and the Caribbean region that are subject to increasing limitations of their methane emissions are expected to be major stakeholders for the CCPI. These companies will generate the demand for offsets that would be transacted through the Initiative as well as potentially being major investors in low-carbon development efforts. The Initiative will be an important tool to assist them in complying with emissions regulations as economically as possible.

The developers/ owners of emission-reducing projects (e.g. renewable energy, energy efficiency, fuel switching, etc.) comprise a second major stakeholder group, as their projects will generate the supply of offsets required by oil and gas operators as well as other sectors that are significant emitters of GHGs. Their primary benefits will come from increased flows of investment/ financing for their projects.

These investments will be of major benefit to the host countries in which the projects are located and will assist inter alia in reducing dependence on fossil fuel imports, resulting in stronger and more sustainable economic development as well as a cleaner environment.

Table 1: Regional Electricity and Emissions Data of the Carribbean Region (compiled 2013)

Country	Annual Electricity Consumption (GWh)	Annual Estimated Emissions from Electricity Sector (Mt CO_2)	Current Installed Capacity (MW)	Current Installed RE Capacity (MW)		Carbon market interest?	Emissions Mt CO_2-eq w/out LUCF	Emissions Mt CO_2-eq with LUCF
Antigua & Barbuda	250	0.13	113	0		Y	387.95	291.12
Bahamas	1,930	1.40	575	-		Y	2,197.20	2,197.20
Barbados	918	0.81	240	1		Y	3,750.50	3,739.50
Belize	462	0.11	136	80		Y	6,335.01	2,310.32
Dominica	90	0.05	24	5		Y	152.17	(219.68)
Grenada	200	0.12	53	0		Y	1,606.47	1,514.47
Guyana	833	0.79	435	54		Y	2,706.05	(23,779.75)
Haiti	N/A	N/A	261	54		Y	5,131.76	6,087.25
Jamaica	3,957	2.90	925	65		N	116,225.10	116,058.10
Montserrat	10	0.01	2	-		N/A	N/A	N/A
St. Kitts & Nevis	130	0.07	63	12		Y	164.47	74.71
St. Lucia	385	0.19	76	0		Y	886.45	541.22
St. Vincent & the Grenadines	130	0.07	47	7		Y	379.50	247.41
Suriname	1,310	0.66	410	189		Y	N/A	N/A
Trinidad & Tobago	7,722	5.60	2,335	-		Y	16,389.79	14,918.27
Totals	18,327	12.87	5,696	468			156,312	123,980

Apart from those primary stakeholders, there will be a wide range of others throughout the Caribbean and neighbouring countries that will be involved in and are likely to benefit from the Initiative, such as: carbon market players (brokers/ traders, information technology companies); technology companies (engineers, contractors, equipment suppliers); financial institutions (banks, investors); and participants in donor-funded programs and projects.

Significance in the Caribbean region

Table 1 presents an overview of the electricity sector and greenhouse-gas (GHG) emissions in Caribbean Community (CARICOM) member countries and overseas territories with data derived from various sources.

A recent paper presented to the Alliance of Small Island States (AOSIS) introduced data on electricity consumption (column 2) and the associated CO_2 emissions (column 3), showing that electricity generation in CARICOM countries and overseas ter-

ritories produces almost 13 Mt CO2/year, much of which could be avoided by introducing renewable energy. Columns 4 and 5 show that there is over 5,000 MW of fossil-fuel-based installed capacity that could be replaced with renewable energy in the region.[6]

The total emissions of CO2-eq from all sources (carbon-dioxide equivalent emissions, aggregating carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O) emissions) from those countries and overseas territories are much higher (columns 7 and 8): in total above 156,000 Mt CO2-eq excluding land use change and forestry (LUCF); and almost 124,000 Mt CO2-eq including LUCF.[7] Considering that these GHG emissions are far greater than for the electricity sector alone, the emission reduction potential from renewable energy and other mitigation measures (e.g. energy efficiency, fuel-switching [i.e., for transport], waste management) could generate significant business under the Caribbean Carbon Pricing Initiative.

Our review of data extracted from the more recent 'Intended Nationally Determined Contributions' (INDCs) of the same countries (excluding Montserrat for which there is no INDC), in the region shows that all but one explicitly envisage the use of carbon market mechanisms (column 6). In several of the INDCs reviewed, countries stated that they have already identified opportunities for (increased) utilization of renewable energy in their power grids. For instance: Antigua and Barbuda is targeting 50 MW; the Bahamas 30 MW; and Grenada is planning to install 15 MW of geothermal, as well as solar and wind power. In most cases, such opportunities are 'conditional' upon receiving support and investment from the international community. Other areas where emission reductions are envisaged are in the transport, waste, industry and agriculture sectors, while a few of the countries reviewed are more focused on the forestry sector (see the INDCs for more details).

Other countries in and bordering the Caribbean region that are not CARICOM members (e.g. Cuba, Curaçao, and the Dominican Republic, as well as Mexico and a few countries from South America) could also be included in the Initiative.

Related work in progress elsewhere

As previously mentioned, the Caribbean Carbon Pricing Initiative will inter alia build upon two UNFCCC-registered PoAs under the CDM that were developed to generate carbon credits.[8] CDM standards and methodologies are considered the most demanding and resilient regulated frameworks for producing carbon credits in the world.

It is envisaged that carbon credits generated under these PoAs, and from other vehicles that lead to emission reductions, will be used by oil and gas facility companies operating in the Caribbean and surrounding regions to partially offset their emissions, in compliance with increased regulation. The PoAs are: the Petrotrin Oil Fields Associated Gas Recovery and Utilization PoA and the RE2Grid PoA, the first currently operating in Trinidad and Tobago, the second established in the Philippines but under consideration for use by renewable energy developers in Caribbean countries, see boxes. While the sectoral coverage of the RE2Grid PoA (i.e. six renewable energy technologies) is included in the INDCs of the CARICOM countries, for the reasons given above it can be expected that a portion of the mitigation outcomes will be required as transfers. The Petrotrin PoA is included in the INDC of Trinidad and Tobago and a draft NAMA has also been prepared. However, due to the significant investment required under both vehi-

6 *'Opportunities in the Electricity Sector in CARICOM', Sealy, Hugh, Ph.D., M.Sc., B.Eng. (Chem.), undated, http://aosis.org/wp-content/uploads/2014/11/Hugh-Sealy-Opportunities-in-the-Electricity-Sector-in-CARICOM-Final-paper-rev-2-KS.docx*

7 *Sixth compilation and synthesis of initial national communications from Parties not included in Annex I to the Convention, UNFCCC, 2005, FCCC/SBI/2005/18/Add.2*

8 *PoAs, once registered with the UNFCCC, are able to add sub-projects that meet criteria set in the approved documents. These projects, once included in the PoA, can generate carbon credits during the 28-year lifetime of the PoA. Registered PoAs are also allowed to expand their geographic scope.*

cles it is unlikely that this will happen without a negotiated transfer of mitigation outcomes. While both PoAs are currently inactive due to the low prices for carbon credits, their 28-year duration makes them eligible to generate CERs until 2040.

The launch workshop

Since submitting the BLM funding proposal, meetings have been held with ECTT and stakeholders in Trinidad and Tobago and in Grenada, and agreement to collaborate with ECTT to further the Initiative has been reached. The Government of Grenada has also agreed to sponsor and host a regional stakeholder consultation to discuss the way forward, planned to be held in Grenada in the spring of 2017 and co-sponsored by the local RCC, for which additional private sector and donor support is being sought. This consultation will bring key public and private stakeholders in the Caribbean and neighbouring countries together for an initial brainstorming on the Caribbean Carbon Pricing Initiative concept.

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The Petrotrin PoA

There are no laws or regulations in Trinidad and Tobago prohibiting the venting of waste gas in oil production activities, and recovery and utilization of associated gas is not obligatory. However, Trinidad and Tobago's national petroleum company, Petrotrin, recognized that the success of any oil company's long-term business requires its commitment to the principles of sustainable development. To that end, they established the Petrotrin Oil Fields Associated Gas Recovery and Utilization PoA under the UNFCCC Clean Development Mechanism in order to provide the revenue necessary to invest in mitigation measures that avoid venting and flaring of methane emissions associated with Petrotrin oil production.

There are plans in collaboration with local firms to design, construct, and operate project activities in 30 oilfields in Trinidad and Tobago under this registered PoA. These project activities will be included in the Petrotrin PoA.

The RE2Grid PoA

The RE2Grid PoA aims to promote the utilization of renewable energy resources by supporting investment in greenfield projects (wind, run-of-river hydroelectric, geothermal, solar PV, wave and tidal energy) that feed electric power into a grid. This PoA enables developers of such projects to overcome financial and other barriers to developing and implementing their projects, by harnessing the financial support made available through the sale of carbon credits.

While initially developed for the Republic of the Philippines, discussions are currently underway with renewable energy developers in Caribbean countries and expansion to additional host countries in that region is anticipated in the near future.

The PoA will contribute to reducing Caribbean host countries' heavy and increasing dependence on fossil fuels for electricity generation while helping to mitigate global climate change.

New research papers discuss key issues for the Article 6 negotiations

Three DEHSt papers analyse different types of NDCs, issues of robust accounting, and compare Article 6 approaches with the flexible Kyoto mechanisms. The papers can be downloaded at **http://bit.ly/2lRzAAM**

Updated carbon pricing introduction goes online

The JIKO Website now features a completely revised introduction to market-based climate action at global level, comprising basic functions of market mechanisms, the experience gained with the Kyoto Protocol and key elements of the Paris Agreement. See **www.carbon-mechanisms.de/en/introduction/**

Glossary

All Carbon Market terms and abbreviations are explained in detail in the glossary on the JIKO website. You can view the glossary here: **www.carbon-mechanisms.de/en/service/glossary/**