

CARBON MECHANISMS REVIEW

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Great Expectations

Will the voluntary carbon market
rise to the challenge?

Scoring Quality

New initiative for enhancing
credit quality

content

Summer 2022



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Dear Reader!

The decisions on the Art. 6 rulebook taken at COP26 mark a milestone for international carbon markets. But what does the Glasgow outcome mean for the so-called voluntary carbon market (VCM)? What are the implications for a market that is facing a more and more capped environment while at the same time experiencing an enormous increase in demand? How can the quality of credits be assessed, given the tremendous quantities that would be needed to meet the demand? And what types of claims should companies allowed to make when using them?

Against this background, this issue of the Carbon Mechanisms Review looks at ways forward for the VCM after Glasgow by first taking a deep dive into the current challenges of the market and possible solutions. A second article of the cover feature analyses the situation of host countries and how the application of the VCM can be promoted in sectors where other policy tools are absent or inefficient or where public funding is limited. Further, we portray a recently started initiative which aims at assessing the quality of carbon credits through a web-based tool.

Elsewhere in the issue, we feature an analysis on supporting Article 6 integration in NDCs and NDC implementation plans. Last not least, we present an interview with Mary Grady and Axel Michaelowa on ways to implement carbon forest standards successfully while at the same time ensuring environmental integrity.

On behalf of the editorial team, I wish you an inspiring read!

Christof Arens, Editor-in-chief



**Wuppertal
Institut**

Carbon Mechanisms Review (CMR) is a specialist magazine on cooperative market-based climate action. CMR covers mainly the cooperative approaches under the Paris Agreement's Article 6, but also the broader carbon pricing debate worldwide. This includes, for example, emission trading schemes worldwide and their linkages, or project-based approaches such as Japan's bilateral offsetting mechanism, and the Kyoto Protocol's flexible mechanisms CDM/JI. CMR appears quarterly in electronic form. All articles undergo an editorial review process. The editors are pleased to receive suggestions for topics or articles.

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Döppersberg 19 · 42103 Wuppertal · Germany

Editor responsible for the content:

Christof Arens, Energy, Transport and Climate Policy Division
Wuppertal Institute for Climate, Environment and Energy
E-Mail: christof.arenis@wupperinst.org

Editorial team:

Christof Arens (Editor-in-Chief)
Thomas Forth, Lukas Hermwille, Nicolas Kreibich, Wolfgang Obergassel

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Keeping promises?

The voluntary carbon market is faced with great expectations under uncertain conditions

By Nicolas Kreibich

Over the last few years, the world has seen a massive proliferation of companies adopting climate change mitigation targets. In March 2021, the Net Zero Tracker published an analysis of the 2000 largest publicly traded companies by sales and found that 417 have made some form of commitment to net zero, representing 21%. By the end of the same year, that number had already risen to 632, corresponding to a share of 32% (Black et al., 2021; Hale et al., 2021)

With this continued momentum of companies adopting some sort of neutrality targets and the expectation that most of them will continue having to deal with residual emissions in the future, the demand for offset credits generated by the voluntary carbon market (VCM) is set to grow considerably in the future. An often cited number comes from the Taskforce for Scaling the Voluntary Carbon Markets initiative, which considers that the VCM will need to grow more than 15-fold by 2030 (TSVCM, 2021). By the middle of the century, Bloomberg even expects that demand will rise from today's 127 million tons to "at least 3.4 billion tons or as much as 6.8 billion tons" (Bullard, 2022).

So while long-term prospects seem rosy, the market is at the same time confronted with profound challenges, many of which are related to the emergence of the Paris Agreement as the new international climate regime. The rules agreed at COP26 in Glasgow therefore provided long-awaited clarity regarding the possible

integration of the VCM into this new regime. However, numerous questions remain unanswered at the international level, in particular whether credits used for voluntary purposes should be robustly accounted for through the application of 'corresponding adjustments' and what type of claims companies should be allowed to make when using these and other VCM credits. This puts the market and its actors under pressure: stakeholders must take decisions on how to adapt to the changed circumstances without exactly knowing what these circumstances mean.

To provide more clarity on how the VCM is to operate in the future and how it could be used by companies, several initiatives have been launched outside the climate regime. However, agreeing on guidance has proven particularly difficult in some key areas, such as the claims that companies should be allowed to make on the basis of carbon credits used. An additional layer of complexity comes in the form of national regulation: a growing number of countries is tightening the rules on the claims that companies can make when promoting their products – rules that will inevitably also impact climate-related claims such as 'climate neutrality'. The voluntary carbon market is therefore confronted with uncertainty in the form of an evolving regulatory landscape, requiring all actors to find new solutions.

Rulebook challenges VCM actors

After six years of intense negotiations, the Parties to the Paris Agreement finally adopted the Article 6 rulebook at COP26 in Glasgow in November 2021. While Article 6 was originally conceived to assist Parties in the implementation of their NDCs, the rulebook expands the scope of this policy instrument. The reporting and accounting framework established under Article 6.2 is also applicable to “other purposes”, which is commonly understood as referring to

the VCM. Host countries can thus authorize credits to be used for non-compliance purposes and make use of the accounting system by applying corresponding adjustments: host Parties adjust their reported emissions balance to account for the credits authorized. With this, Article 6 opens up to the voluntary carbon market without making the authorization and corresponding adjustments a requirement for credits used for voluntary purposes. Therefore, the integration of the VCM into the Article 6 architecture remains a proposal, while a decision on its application will have to be made by the market and its key actors.



Source: <https://unsplash.com/@martztl>, Marcel Strauß on unsplash.com

These actors are also confronted with other challenges brought about by the new rules agreed in Glasgow:

Private certification standards must decide whether and how to integrate their certification activities into the Article 6 regime. In principle, three options can be differentiated:

1. Standards could continue operating outside of the UN with their activities generating credits that are neither authorized by the host Party nor backed by corresponding adjustments.
2. An alternative would be to make use of the Article 6.2 infrastructure and to certify credits that are authorized and have been accounted for. This integration would not only require the certification standards to align its implementation rules with the provisions of the Article 6.2 Guidance but it would in particular require the host Party to meet the participation requirements of the Guidance – with standards having to control for this.
3. A third possibility consists in private certification standards making use of the Article 6.4 mechanism overseen by the UN. With this option, some of the infrastructure and processes established by the standards would become redundant. However, given the lack of governance certainty, building on the Art. 6.4 mechanism could be considered the best way forward to ensure large eligibility on different markets in the future.

It should be noted that these options are not mutually exclusive but that a standard could make use of different options and even combine these within one single mitigation activity.

Activity proponents and suppliers, in turn, will have to decide on the type of units to be generated and offered, the host Party in which to operate and how to secure units backed by corresponding adjustments if they aim to generate and sell such credits. Activity proponents will likely have to engage much more directly with the government of the host Party and establish a new working relationship. Since involving government representatives was not required by most private certification standards in the past, many project developers could operate ‘under the radar’ of the host Party government. This will have to change now if activity proponents want to implement activities that generate authorized credits that are correspondingly adjusted.

Buyers and credit users in turn are confronted with the task of having to align the purchase of credits with their broader corporate climate strategy. At the same time they are affected by the activity proponent’s risks in terms of securing authorized units that are backed by corresponding adjustments.

VCM host Parties are particularly thrown at a deep end: Most host Parties have in the past not been in touch with the VCM activities on their territory and will now have to decide whether and how to make use of these and future activities under the Paris Agreement. Parties willing to host and authorize VCM activities will have to develop a VCM strategy that is ideally integrated into a broader Art. 6 strategy. Key steps to be taken include the development of an authorization process and the installation of institutional and governance arrangements.

As can be seen, despite the fact that the UNFCCC does not regulate the VCM, all of its actors will be directly or indirectly be impacted by the Glasgow outcome. The relationships among actors will be characterized by growing



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interdependence and mutual influence. They must decide on how to integrate into the evolving landscape of the voluntary carbon market while at the same time their decisions are shaping this very landscape. However, ignoring the new reality of the Paris Agreement and the place that Article 6 has reserved for the VCM in this new regime is not a viable alternative.

Bridging regulatory gaps: Transnational initiatives

While the Glasgow outcome has opened the door for the integration of the VCM into the international regime, many questions about the future role of the market and its operation remain unanswered. Over the last couple of years, numerous initiatives have been launched with the objective of bridging regulatory gaps that threatened to undermine the integrity and credibility of the market (for an overview on initiatives see: Kreibich, 2021). And threats there are various:

On the supply side, the expected increased demand for carbon offsets raised concerns about the quality of credits. Ensuring that emission reductions (and removals) meet key requirements such as being real, additional and permanent has already been challenging in the past. With host countries now having to submit their own nationally determined contributions and more generally being committed to the ambitious long-term objectives of the Paris Agreements, ensuring the quality of credits will become even more difficult, in particular when it comes to demonstrating the additionality of crediting activities (for a discussion see: Michaelowa et al., 2019). This makes it imperative to develop common standards applicable across the market. One initiative aimed at establishing and enforcing new standards for

high quality carbon credits is the **Integrity Council for the Voluntary Carbon Market** (IC-VCM). The group's Core Carbon Principles will be published by the end of 2022, following a public consultation to be launched in July.

Integrity must also be ensured at the demand side by defining what can be considered a legitimate use of the VCM and its credits. To keep the global temperature rise to well below 1.5 °C, all sectors will have to do their fair share. There is now growing consensus that the use of carbon credits can only play a supplementary role, which at least restricts the long-held paradigm that it is irrelevant for the climate where in the world a ton of carbon is reduced. But how can such supplementarity be defined? What measures should companies be required to undertake within their value chain in order to consider their use of carbon credits to be legitimate? And what claims should companies be allowed to make?

One of the most influential initiatives in setting the bar for corporate climate targets is the **Science-based targets initiative** (SBTi). In the run-up to COP26, the SBTi had published its Corporate Net Zero Standard (SBTi, 2021), which supports companies to define emission reductions pathways that are aligned with what climate science deems necessary to meet the objectives of the Paris Agreement. While the SBTi originally focused on short- to mid-term targets for corporate's internal emissions and explicitly ruled out the use of offsets for meeting these targets, the initiative is now exploring how credits from the voluntary carbon market could be integrated into companies' strategies.

Depending on where companies find themselves in their journey towards net-zero, two types of uses are possible: When companies are "at net-zero", those with residual emissions within their value chain are expected to neutralize those emissions with an equivalent amount of removals, which may be sourced from carbon credits. However, companies can also use carbon credits in their transition towards a state of net-zero emissions as part of their engagement in supporting "beyond value chain mitigation". While not being made a requirement, support of beyond value chain mitigation is encouraged by the net zero standard. There is, however, no clarity about the claims that companies can make on the basis of these investments made outside their value chain and SBTi is still in the process of exploring this issue.

An initiative explicitly aimed at providing guidance on the claims that companies can make is the **Voluntary Carbon Markets Integrity initiative** (VCMI). With the voluntary carbon market being part of its very name, the expectation was that the VCMI would develop a guidance on how to make legitimate claims based on credits sourced from the VCM. Many hoped that the VCMI would assist companies in making differentiated claims depending on whether credits used are backed by corresponding adjustments or not. VCMI's provisional Claims Code of Practice published for public consultation in June 2022 (VCMI, 2022), however, does only require transparent reporting on whether the credits used are associated with corresponding adjustments or not, while a differentiation of claims on the basis of the carbon credits' attributes is not provided. Instead, the proposal differentiates claims according to companies' progress towards their internal mitigation targets and the extent to which residual emissions are covered through carbon credits.

It remains to be seen whether this will change with the finalization of the code over the next months after additional feedback from stakeholders has been gathered. This must be seen in light of the fact that another draft code has been published in parallel that takes a much clearer stance in this regard: **the Nordic Dialogue on Voluntary Compensation** explicitly requires companies to only make offsetting claims if the units used are backed by corresponding adjustments (Nordic Dialogue on Voluntary Compensation, 2022). It will be particularly interesting to observe the positioning of other initiatives on this issue, such as the “High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities” launched by the UN Secretary-General António Guterres earlier this year. Other promising initiatives that could provide guidance in this regard have been initiated by the British Standards Institution (BSI), such as the development of ISO 14068 „Greenhouse gas management and related activities – Carbon Neutrality“.

Assisting companies in making meaningful and unequivocal claims that are backed by

ambitious internal action and legitimate use of carbon credits will be particularly relevant as the pressure on companies through national regulation will increase further: A growing number of governments is already tightening the regulation on claims that companies can make in advertising (see also: Kreibich & Jüde, 2022). Their approaches vary substantially: Many countries, including Germany, rely on case law with courts having to rule whether climate-related claims are in line with companies’ legal obligations to make claims that are truthful, accurate, substantiated and not exaggerated. However, there are also countries that have adopted fundamentally different approaches: As the first country worldwide, France has adopted reporting obligations regarding climate neutrality and is currently agreeing on the provisions that companies must adhere to for making respective claims. Companies claiming carbon neutrality must meet the criteria and are otherwise confronted with sanctions. With the public regulation of claims becoming stricter, including at EU level, there is an increased need for guidance.



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Outlook

So far, the voluntary carbon market has not been able to find an agreement on how to align itself with the new circumstances introduced with the adoption of the Paris Agreement. While outstanding issues are still being addressed by several ongoing and new initiatives, the question raises: how can they deliver? Three aspects seem particularly relevant:

First and foremost, solutions should no longer be sought in isolation. As shown by the attempts to deal with the question about the claims that companies should be allowed to make, such fundamental decisions cannot be taken without also considering other aspects, such as the quality of carbon credits used, the conditions under which these are generated in host countries and the mitigation efforts that companies should make. New initiatives should take such a broader orientation and also bring together the multiple perspectives on both the supply and the demand side of the market.

Second, capacity building should take centre stage. The challenges host countries are confronted with are high, in particular for those developing countries with limited institutional and technical capacities. There is hence an increased need for capacity building to navigate the uncharted territory of the voluntary carbon market post-Glasgow. However, support is needed not only for future host Parties but also for companies aiming to buy credits for voluntary purposes. When it comes to the actors that could provide such capacity building support, activity proponents and suppliers are in a peculiar situation: They are often in direct contact with both, credit users and host countries and could therefore actively engage in capacity building.

While these efforts are laudable and should not be discontinued there is also an inherent

conflict of interest if capacity building initiatives are solely driven by actors with vested interests. A stronger involvement of civil society and academia should therefore be strived at as well as peer-to-peer learning among national governments, in particular from the Global South. Governments from the Global North should continue supporting these activities, in particular by providing financial support. Strengthened capacities and a better understanding may also feed back into the initiatives and lead to more successful outcomes.

Third, we need a better understanding of the alternatives to the existing offsetting approach and the role the VCM could play therein. While there is clarity to the extent that such a non-offsetting approach would allow companies to invest in mitigation activities outside their value chain without using these investments to balance their own emissions, other aspects are still vague. How can such an approach be made more attractive to companies and what are alternative claims these should be able to make on the basis of the support provided? What type of activities should be supported under this new approach and how can the VCM contribute to their implementation? How should the activities relate to the company's own emissions and what requirements should companies have to meet before being allowed to engage in the approach?

These and other questions are still to be answered, and they have to be answered quickly. One of the reasons for the delay is that the market was too busy in finding a solution to the double counting conundrum and several VCM actors have in the past focused on preventing the introduction of such an alternative approach. The time lost must now be made up by developing an approach that allows private enterprise to support mitigation outside their value chain without misleading investors and clients.

Further information

This text partly builds on ongoing research that explores the impact of the Glasgow outcome on the voluntary carbon market. The full paper will be published in August 2022.

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Underexploited potential

Host countries pick up voluntary carbon markets to finance sustainable development

by Adriaan Korthuis and Sanggeet Manirajah, *Climate Focus*

Governments in Asia, Africa and Latin America are slowly picking up on voluntary carbon markets in their endeavour to protect and restore forests, improve access to energy and enhance sustainable farming. And rightly so, as voluntary carbon markets have been growing impressively of late, fuelled by compensation strategies under surging corporate climate neutral ambitions. Voluntary carbon markets can support developing countries to achieve or go beyond their NDC targets. When coordinated with other finance flows, these private investments can help bridge financing gaps in implementing climate action.

When it comes to engaging in voluntary carbon markets, governments have come a long way, and so have project developers. The latter found the absence of government involvement a rather appealing feature of voluntary carbon markets, as it allowed them to proceed comparatively quickly without cumbersome red tape. And the indifference was reciprocal: governments, until recently, have not been as interested in voluntary markets, focusing instead on projected revenues from compliance mechanisms such as the Clean Development Mechanism (CDM) and the eventual transactions under Article 6 of the Paris Agreement.

Channelling billions into mitigation activities

Over the past years, voluntary carbon markets have already been channelling billions to support carbon credit projects in developing countries, and are projected to continue scaling up rapidly (Trove Research, 2022). Private actors are ready and willing to invest in projects and initiatives in the voluntary carbon markets now. The scene around public climate finance and carbon finance is falling behind in this respect. Transactions following the just agreed Article 6 rulebook are still only at pilot scale. Furthermore, public climate finance pledges have been slower to mobilize, and where available, they fall short of what is required to put poorer countries on a low-carbon development pathway. There is no agreed metric to account for climate finance, but all sources – including OECD numbers – show that climate finance falls short of the pledged minimum of USD 100 billion per year.¹ In a 2020 report, the international-aid charity Oxfam estimated public climate financing at only USD 19–22.5 billion in 2017, while the OECD estimated more than USD 70 billion for the same time frame (Timperley, 2021). In the Glasgow Climate Pact adopted at the occasion at the 26th session of the parties to the U.N.

¹ In 2009, developed countries committed to mobilize USD 100 billion a year by 2020 and through 2025 to support climate efforts in developing countries.

Framework Convention on Climate Change (UNFCCC), governments noted “with deep regret” that developed countries failed to meet that goal in 2020 to mobilize the promised amount of climate finance.

Most countries overlook potential of voluntary carbon markets

By strategically and proactively engaging in voluntary carbon markets, governments in developing countries can attract funding to fast-track emission reductions and removals in the short-term, while they adopt laws and put in place the necessary policies to abate emissions and mitigate climate change. The Voluntary Carbon Markets Global Dialogue (VCM Global

Dialogue, see box) identified voluntary carbon markets as a powerful policy tool. In an extensive series of stakeholder consultations, including with government representatives from countries in Asia, Africa and Latin America, the VCM Global Dialogue found only few national governments are currently using voluntary carbon markets as a policy tool. Colombia and South Africa for instance are among the few exceptions, having linked their national carbon pricing systems to voluntary carbon crediting programmes. This allows companies subject to carbon pricing to cover a part of their obligations by purchasing and retiring carbon credits under programmes such as Verra’s Verified Carbon Standard. By doing so, investments are steered into sectors beyond those covered by the countries’ carbon pricing policies. For many other countries however, the potential of voluntary carbon markets remains unexploited.

The Voluntary Carbon Markets Global Dialogue

The Voluntary Carbon Markets (VCM) Global Dialogue brought the voices of developing countries to the centre of discussions on shaping voluntary carbon markets. Between June and October 2021, the VCM Global Dialogue hosted extensive stakeholder consultations in Asia and the Pacific, in Africa and in Latin America. The consultations have resulted in a six-point action agenda how voluntary carbon markets can reach their full potential in driving sustainable and inclusive development:

- Governments can use the VCM to tap into additional mitigation potentials;
- Governments, companies, and GHG crediting programs should promote clear and transparent VCM accounting;
- Carbon credit buyers and investors should prioritize transformational VCM investments with broader development benefits and verified SDG contributions;
- The VCM can empower and strengthen the rights of indigenous peoples and local communities;
- Governments and private partners should cooperate in developing VCM transactions at sectoral and jurisdictional scales;
- Governments, companies, and carbon market facilitators should initiate regional and national VCM dialogues

The VCM Global Dialogue was implemented by Climate Focus, the Indonesia Research Institute for Decarbonisation, SouthSouthNorth and Transforma and was supported by Verra. Find out more at www.vcm-gd.org



Source: *Scaling Up Renewable Energy Access in Eastern Indonesia* by Asian Development Bank (<https://flic.kr/p/o4bn16>) / Flickr / CC BY-NC ND 2.0 (<https://creativecommons.org/licenses/by-nc-nd/2.0/>)

How governments can apply voluntary carbon markets

For governments, voluntary carbon markets can enhance emission reductions or removals in sectors where other policy tools are absent or inefficient or where public funding is limited. Governments can actively promote and support carbon market investments in those areas. In order to do so, the VCM Global Dialogue provides three recommendations on how governments can unlock the potential of voluntary carbon markets (VCM Global Dialogue, 2021).

First and foremost, governments should start gathering information on what carbon projects are already going on and how carbon finance is used. Knowledge and information are the starting point of any engagement. A national VCM database would be the result of this information gathering.

Next, governments could identify and prioritise sectors, industries and regions for carbon market investments. In doing so, they could carefully consider how carbon markets can complement other policy instruments, in time, in public finance, in abatement cost and in the need of attracting private sector investment.

In this evaluation and prioritisation exercise, governments would also evaluate which carbon market instruments would fit their needs best for which purposes: transactions on voluntary carbon markets or the ones under an Article 6 mechanism. This could depend on expected demand and on the expected cost-benefit balance of respective transactions.

Active promotion of investment opportunities would follow next, both domestically and by attracting direct foreign investment. Promotion can for instance take place by investment promotion agencies, that would add voluntary carbon market opportunities to their portfolios.

Developing countries want to be actively engaged in voluntary carbon markets

Recognizing the challenges faced by host countries and building on the findings and recommendations of the VCM Global Dialogue, the Voluntary Carbon Market Integrity Initiative (VCMII) initiated the VCM Access Strategies. This initiative provides technical assistance and capacity building for host countries seeking to maximize the investments through the voluntary carbon market. This support is delivered by Climate Focus and UNDP and is supporting both national and subnational governments in Africa, Asia and Latin America.

Through this work, the need for support to host countries is very clear. Host governments do want to engage in voluntary carbon markets and are seeking strategic support on how best to coordinate and use these different financing mechanisms. The plethora of international sources and modalities of climate finance can be confusing for policymakers. Understanding the different instruments, how they interact, and the institutional and regulatory requirements that

would be needed, are some among the many questions host countries are grappling with and seek support on. Upon understanding the role the distinct mechanisms play, among them the voluntary carbon markets, governments are in a better position to channel this financing to the distinct mitigation sectors and activities.

A crucial ingredient is empowering local actors

For voluntary carbon markets to maximize their impacts in developing countries, barriers for domestic actors to engage in the VCM need to be addressed and removed. Domestic non-state actors (e.g., NGOs, civil society organizations and companies) in developing countries are becoming increasingly aware of the opportunities offered by voluntary carbon markets. The sale of carbon credits on international markets can provide an additional and significant revenue source to their initiatives, and potentially reduce reliance on grants and public funding. However, the expert knowledge and costs required to set up a carbon project are prohibitively high. In practice, most voluntary carbon projects are therefore funded, established and managed by foreign or international entities. From a development impact perspective, this creates imbalance and dependence.

To overcome these barriers, host countries, with the support of donor countries and institutions, need to build an ecosystem of actors that are able to play the different roles for a robust, high-integrity and climate impact-delivering carbon market. These include project developers, land owners including local communities, verifiers and auditors. Domestic companies and investors, when aware and knowledgeable about the potential of carbon markets, could be an additional source of investments for project development, whether as a source of upfront financing or as buyers of credits.

Corresponding adjustments are not on top of host countries priorities

Host countries are also impacted by the hotly debated issue of corresponding adjustments. Corresponding adjustments are an accounting feature under Article 6 arranging that emission reductions are not reported in host country and purchasing country emission registries at the same time. The ongoing debate is whether such adjustments should also be made in host country emission registries even in the absence of a

purchasing country, i.e. in case a private sector buyer purchases a voluntary carbon credit that will not show up in any UNFCCC-linked emissions ledger. Those in favour of host country's corresponding adjustments for carbon credits traded in voluntary carbon markets argue they would make sure developing countries don't go freeriding on their NDCs and make sure they develop strong emission reduction policies. Those opposing host country's corresponding adjustments in voluntary carbon markets stress, amongst others, unfairness to host countries. Countries are not only foregoing emissions reductions that they cannot afford



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themselves, but have to finance their own mitigation and on top, and fork out resources to put in place the institutions to offer corresponding adjustments to foreign countries and entities buying carbon credits (Streck, 2020).

In reality, host countries' priorities are with many other aspects of carbon market integrity that need to be addressed first, and not necessarily with corresponding adjustments. This issue has been raised by several host countries in the context of country-country meetings as part of the VCMI processes. As part of the VCM Access Strategies, needs assessments are conducted with host countries to understand which issues regarding the VCM are priorities for host countries. These include establishing minimum safeguards, ensuring proper grievance mechanisms are in place, clear and fair benefit sharing mechanisms, clarity of guidelines and criteria for market participants (e.g., project developers, financiers, communities), among others. When corresponding adjustments come up, they are not the utmost priority in the short term for countries. It will be long before most host countries can and will be able to set up the institutions needed for offering corresponding adjustments.

The voluntary carbon market is no panacea for mitigation action. However, it can fast-track emission reductions while governments design, formulate, and adopt relevant strategies, policies, and laws to abate greenhouse gas emissions and mitigate climate change. When host countries are proactively engaging in these markets, these emissions reductions will help achieve multiple benefits and align with local policies and priorities.

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Scoring Credit Quality

Enhancing the quality of carbon credits through a transparent, user-friendly scoring tool

By Lambert Schneider, Felix Fallasch (Öko-Institut), John Holler (World Wildlife Fund-US), Pedro Martins Barata, Christa Ogata, Sommer Yesenofski, Darcy Jones (Environmental Defense Fund)

Demand for carbon credits is increasing as companies and organizations use carbon credits to meet their voluntary climate goals and legal obligations. In recent years, the voluntary carbon market (VCM) experienced considerable growth, reaching more than US\$1 billion in traded value in 2021 (Forest Trends' Ecosystem Marketplace, 2021).

This unprecedented increase in volume is accompanied by concerns about the quality of carbon credits. Many companies want to act responsibly, but find that there is no clear, public guidance to help them assess which carbon credits are high-quality. The lack of information about carbon credit quality creates uncertainty, undermines ambition and constrains investment in climate change mitigation.

A scoring tool for carbon credit quality

To help address these concerns, Environmental Defense Fund (EDF), World Wildlife Fund (WWF-US) and Öko-Institut launched the [Carbon Credit Quality Initiative \(CCQI\)](#). The initiative is a science-driven, independent, and transparent source of carbon market information, developed by leading non-profits, carbon market experts and researchers.

CCQI provides a user-friendly, web-based tool to score the quality of different carbon credit types. The scores are derived from a thorough, publicly available assessment methodology that evaluates carbon credits against multiple criteria, providing a nuanced picture of carbon credit quality.

Moving the market toward quality

CCQI aims to move the market towards higher quality by increasing transparency of different types of carbon credit. CCQI's tools and resources could also guide the design of compliance market frameworks, such as national or subnational carbon markets, the Article 6.4 mechanism, cooperative approaches under Article 6.2, or the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) adopted by the International Civil Aviation Organization (ICAO). The initiative can also help carbon crediting programs to identify areas for improving their rules, and guide project developers in identifying particular quality risks.

How are carbon credits assessed?

CCQI does not assess individual carbon credits or projects, but rather assesses different types of carbon credits. The scores are based on a combination of factors, including the project type, the carbon crediting programme, the quantification methodology, the host country, and whether the carbon credits have been authorised for use under Article 6 of the Paris Agreement.

CCQI uses a set of 19 criteria that are weighed based on their importance and the context in which the carbon credit is generated and used. Together, these criteria make up the scores for seven quality objectives:

1. Robust determination of GHG emissions impact
2. Avoiding double counting
3. Addressing non-permanence
4. Facilitating the transition to net zero emissions
5. Strong institutional arrangements and processes
6. Environmental and social impacts
7. Host country ambition

CCQI scores represent the expected quality for the type of carbon credit based on these features. Individual projects may score differently under different criteria and sub-criteria. Therefore, additional due diligence on individual projects is encouraged.



Source: Hussein, an artisan stove maker in Mwanga, Tanzania by Watkins / DFID (<https://flic.kr/p/yQwP85>) / Flickr / CC BY 2.0 (<https://creativecommons.org/licenses/by/2.0/>)

Where is CCQI now?

With the demo phase recently completed, the CCQI team has assessed three widely-used project types (landfill gas utilisation, efficient cookstoves and establishment of natural forest), four major carbon crediting programmes (Clean Development Mechanism, Climate Action Reserve, Gold Standard and Verified Carbon Standard), and ten host countries.

In May 2022, CCQI launched a prototype of the [scoring tool](#) that enables users to access scores based on search queries of project type, carbon crediting programme, quantification methodology, host country and other relevant features of carbon credits.

The three project types that were assessed in the demo phase contributed approximately 10% of the market based on carbon credits issuance in the past two years. The assessment strategically focused on key project sub-categories and frequently used methodologies.

Lessons learned from the first round of demo scorings

The first set of scores released by CCQI in May 2022 reveal that carbon credits often perform well in some areas but poorly in others. Efficient cookstove projects, for example, face serious shortcomings in quantifying emission reductions and addressing non-permanence but often generate high environmental and social benefits.

CCQI's first set of scores also uncovered considerable differences between carbon crediting programs. For example, the Clean Development Mechanism was found to have the best third-party auditing rules, the Climate Action Reserve performed best in its approach for compensating for potential non-permanence, the Gold Standard was found to have the most comprehensive environmental and social safeguards, and the Verified Carbon Standard performed high in its governance, transparency and its approaches for reducing non-permanence risks.

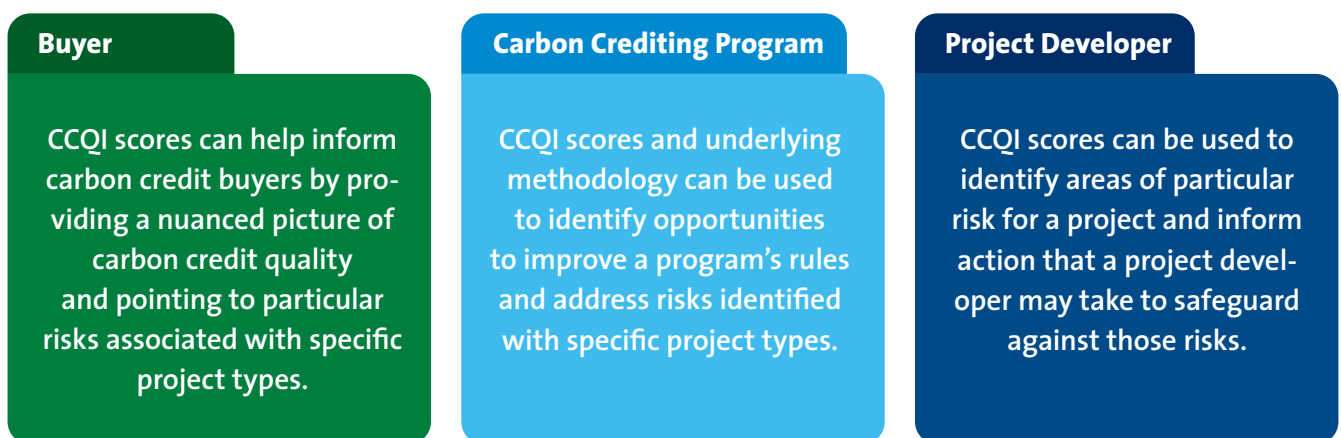


Figure 1: CCQI uses according to actor. Source: Authors

The Carbon Credit Quality Initiative

carboncreditquality.org/scores.html

CCQI
Carbon Credit
Quality Initiative

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What the Scores Mean

Scores are illustrated on an interval basis from 1 to 5, with 5 representing the highest score. The scores have the following meaning:

- 5 Very high confidence or likelihood that the assessment subject meets the criterion or quality objective.
- 4 High confidence or likelihood that the assessment subject meets the criterion or quality objective.
- 3 Moderate confidence or likelihood that the assessment subject meets the criterion or quality objective.
- 2 Low confidence or likelihood that the assessment subject meets the criterion or quality objective.
- 1 Very low confidence or likelihood that the assessment subject meets the criterion or quality objective.

"NA" means that a quality objective or criterion has not been assessed. "NR" means that the quality objective or criterion is not relevant for the carbon credit under consideration. See [here](#) for further information on these gradings.

The scores for the seven quality objectives are designed to provide users with a nuanced picture of expected quality. However, users should be aware that scores only represent expected quality for the type of project – the performance of individual projects could vary considerably; therefore, insights from using this tool should be supplemented, if possible, with further due diligence on individual projects. Please also note our [FAQs](#) and the [Site Terms and Private Policy](#) in relation to these scores.

Source: Screenshot CCQI website

What makes CCQI unique?

CCQI is one of several ongoing initiatives to enhance integrity in the voluntary carbon market. The CCQI project team engages with parallel initiatives within the carbon markets space.

For example, CCQI's core team members have also been closely involved in the Integrity Council for the Voluntary Carbon Market (IC-VCM), which aims to establish a threshold standard for carbon credit quality. Project experts also served on the Expert Advisory Group of the Voluntary Carbon Market Integrity Initiative (VCMI), a multi-stakeholder platform to drive credible, net-zero aligned participation in the

VCMI, and participate in the Business Alliance to Scale Climate Solutions (BASCS), an initiative of businesses and NGOs working to improve and scale business investment in climate solutions.

CCQI differs in several aspects from other initiatives. It is not funded, even in part, by revenues related to carbon credits. Moreover, credits are scored on an interval scale from 1-5, not on a binary basis. This leads to a granular assessment, enables buyers to make more informed decisions, and provides a clear path for project developers and carbon crediting standards to improve. Lastly, all information and resources are transparent and publicly available and free of charge.

What's next for CCQI?

To scale up the application of CCQI's methodology, the team is in the process of assessing five additional project types (large-scale wind, large-scale solar, leak detection and repair in gas systems, oil and gas flaring and livestock manure management) and one additional carbon crediting program (American Carbon Registry). This round of assessments, set to be completed by December 2022, will significantly increase the market coverage of CCQI's assessments.

To further its mission to enhance the quality of carbon credits, the CCQI team will continue to improve the assessment methodology, add further assessments and scores and update existing assessments as programme requirements change.

Further information:

Learn more about the Carbon Credit Quality Initiative and explore the scoring tool at www.carboncreditquality.org

If you would like to work with us or provide feedback, please contact our team at carboncreditqualityinitiative@gmail.com

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Towards readiness

Supporting Article 6 integration in NDCs and NDC implementation plans

By Hanna-Mari Ahonen, Perspectives Climate Group; David Newell, Swedish Energy Agency; Aayushi Singh, Perspectives Climate Group

To achieve the long-term goals of the Paris Agreement (PA), the scale and pace of mitigation action must be urgently stepped up, and the private sector needs to be engaged. International market-based cooperation can enable ambition-raising by accelerating and scaling up mitigation action faster and cost-effectively. It can mobilise public and private actors to implement and enhance countries' Nationally Determined Contributions (NDCs), and contribute to ambition-raising beyond NDCs.

Following six years of negotiations, COP26 in Glasgow marked the adoption of rules for market-based cooperation under Article 6 of the PA ("Article 6 Rulebook"). Article 6 presents participating Parties with three forms of cooperation to allow for higher ambition in climate action and promote sustainable development. These are:

- i) Article 6.2 guidance for cooperative approaches;
- ii) Article 6.4 rules, modalities, and procedures for an internationally governed crediting mechanism and
- iii) a framework for Article 6.8 non-market approaches (NMAs).

This article focuses on market-based cooperation under Article 6.2 and 6.4.



Source: *Repelling Inspection* by Dennis Schroeder/NREL (<https://flic.kr/p/BbTGgp>) / Flickr / CC BY 2.0 (<https://creativecommons.org/licenses/by-nc/2.0/>)

Article 6.2 guidance governs the use of internationally transferred mitigation outcomes (ITMOs) towards NDCs, international mitigation purposes (e.g., compliance under the CORSIA scheme for airlines) and/or other purposes (e.g., voluntary offsetting). Countries participating in such cooperation must ensure environmental integrity and apply robust accounting. They can apply their own criteria and procedures for ensuring the environmental integrity of mitigation outcomes and/or utilise the Article 6.4 Mechanism (A6.4M) or independent crediting standards. Public and private actors participating in Article 6 cooperation will need capacity to understand and meet the relevant requirements. Host countries have a key role in assessing whether proposed mitigation activities are consistent with their NDC and long-term low emission development strategies. Since ITMOs cannot be used towards the host country's NDC, a host country should authorise ITMOs only for mitigation beyond what is needed for NDC achievement.

Understanding the interlinkages between Article 6 cooperation and host country NDC implementation is crucial for ensuring that Article 6 cooperation contributes to – and does not undermine – the implementation of NDCs or the long-term goals of the PA. National Article 6 strategies and criteria should be developed in parallel with NDC implementation planning. This article aims to shed light on these issues, based on conceptual work and practical experience.

The role of Article 6 in NDCs and NDC implementation plans

NDCs and the NDC implementation plans reflect national circumstances and priorities of countries to combat climate change. NDCs are high-level documents that describe a country's targets. An NDC implementation plan elaborates the country's policies, priorities and plans to achieve its NDC targets, available resources and support needs, potentially including sector/activity-level information and plans for Article 6 cooperation (Michaelowa et al., 2021a). NDCs and NDC implementation plans set the framework conditions for Article 6 cooperation by that country. Consequently, Article 6 readiness requires a clear understanding of current and future NDC targets and plans. The clearer and more detailed the overall information and strategy for NDC implementation, the easier it is to define an Article 6 strategy that focuses on additional mitigation opportunities that are consistent with the short-, mid-, and long-term targets of the country.

International market-based cooperation under Article 6 can serve different objectives. A country may seek to engage in Article 6 cooperation to help to meet and enhance its NDC targets, attract investment into the country, facilitate technology transfer, or build capacities or finance “high-hanging” mitigation measures that it cannot implement without external financial support. Depending on the choice of goal(s), a country may pursue a pure ‘buyer’, ‘seller’ or even a ‘mixed’ strategy in its Article 6 engagement. It must be noted that cooperation under Article 6 cannot be the primary instrument of NDC implementation. It should be viewed as one of the many tools available to enhance a country's climate action by incentivising cost-effective mitigation and mobilising finance for low-carbon development (Michaelowa et al., 2021b). Also, non-state actors, such as companies, can engage

in Article 6 cooperation, as activity developers and sellers and/or as buyers. Companies may use ITMOs or Article 6.4 Emission Reductions (A6.4ERs) to finance mitigation beyond their value chains and make claims about offsetting specific emissions or contributing to NDC achievement.

To be “ready” for Article 6 cooperation, countries need to gain a good understanding of Article 6 participation requirements, develop policies, build institutional capacities, and establish necessary infrastructure. However, as countries differ in their formulation of NDCs as well as their Article 6 strategies, Article 6 readiness will not be based on one-size-fits-all actions. Rather, it is a dynamic process involving different steps performed by different entities (Michaelowa et al., 2021a).

Michaelowa et al. (2021a) propose three building blocks for Article 6 readiness: Article 6 strategy and guiding principles, Article 6 governance and institutional framework and Article 6 monitoring infrastructure. Figure 2 presents key considerations for each building block.

In an empirical analysis of Article 6 readiness in updated NDC submissions, Michaelowa et al. (2021b) found that 77% of the 68 countries who submitted updated or revised NDCs between July 2019 and July 2021 indicated their interest in market-based cooperation under Article 6. Of these, 7% of the countries communicated a ‘buyer’ strategy, while others preferred Article 6 engagement as sellers or through a mixed strategy. This may hint at a prolonged imbalance between buyers and sellers. The adoption of the Article 6 Rulebook provides countries with much needed clarity to develop their Article 6 strategies, institutions, and infrastructures.

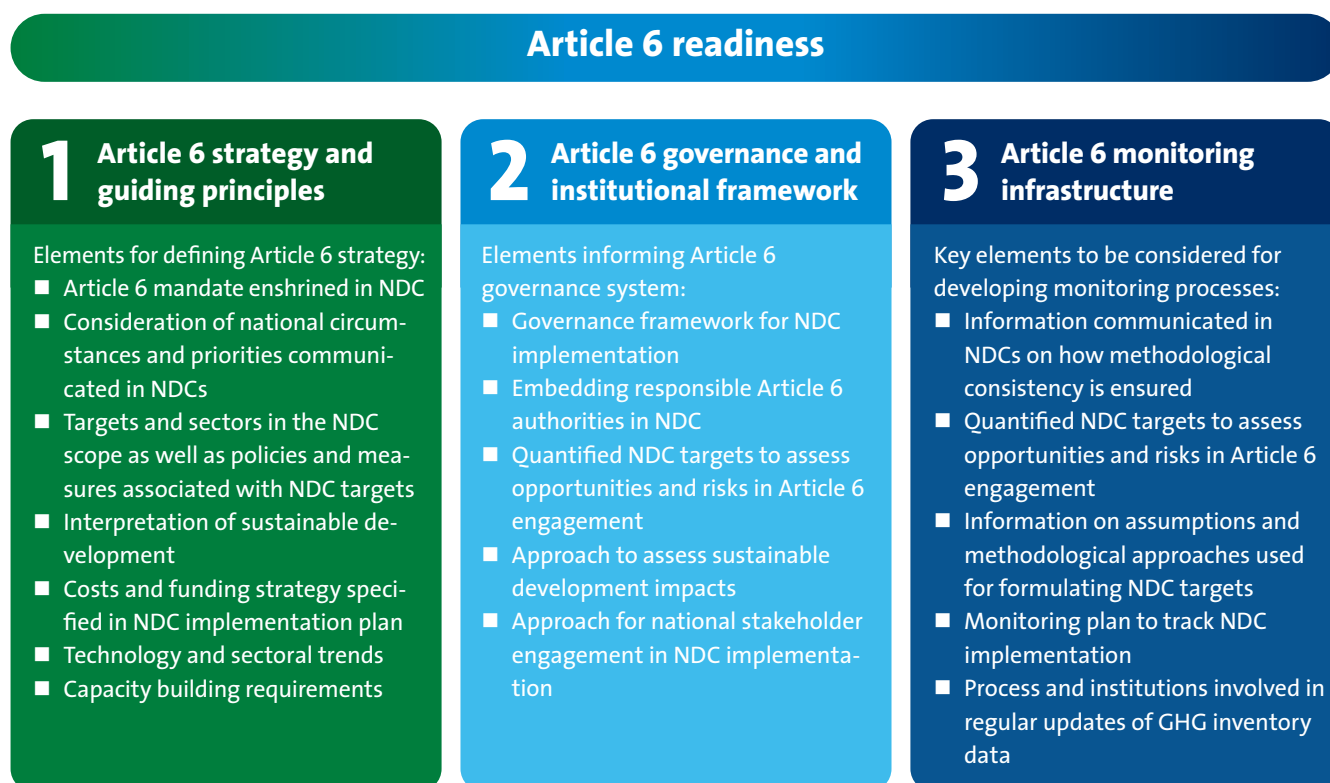


Figure 2: Article 6 readiness - Building blocks. Source: The authors

How to maximise synergies in getting ready for Article 6

Article 6 strategies and priorities should be developed in close collaboration with entities involved in NDC development and implementation, and ideally incorporated in NDC implementation plans.

The analytical framework to assess Article 6 readiness in NDCs and NDC implementation plans developed by Michaelowa et al. (2021a) is discussed below.

Assessing Article 6 readiness in NDCs

The NDC sets the context for the Article 6 strategy. Communication of the **intention to use Article 6** as well as the scope of intended Article 6 cooperation in the NDC is an important signal of the country's willingness to engage with the international carbon market community and can attract potential partner countries.

Information regarding the **scope and coverage of the NDC** as well as a clear description of **NDC targets** helps countries in effectively utilising Article 6 as a means to achieve their mitigation targets. For buyers, this means understanding



Source: The RBZ-2 Kazakhdorstroy concrete-mixing plant by ADB (<https://flic.kr/p/dQTxCA>) / Flickr / CC BY-NC-ND 2.0 (<https://creativecommons.org/licenses/by-nc/2.0/>)

the demand for ITMOs, for host countries it relates to information such as using revenues from the sale of ITMOs for NDC implementation, retaining mitigation from cooperative approaches domestically, agreeing on mitigation-sharing with ITMO buyers and/or using the A6.4M for results-based climate finance. The more disaggregated and granular the information, the better the countries will be prepared to identify the opportunities for international cooperation.

Several countries' NDCs include information on the legal and institutional framework for formulating, implementing and updating NDCs. This information is useful for identifying which responsible entities should be engaged also in national Article 6 processes.

With regards to **accounting and monitoring under Article 6**, information on the calculation of the NDC emission balance from all emission sources and sinks covered in the NDC, clarity on target years for NDC targets, as well as disclosure of applied accounting approach are important. A functional transparency framework is necessary to track a country's progress in achieving its NDC targets, thereby supporting the country's engagement in market-based cooperation.

Assessing Article 6 readiness in NDC implementation plans

NDC implementation plans report existing and planned **policies and measures**, prioritisation of said measures as well as on the country's interpretation of **sustainable development**. For a country participating in market-based cooperation, it is important to keep track of relevant policies as it is a requirement for determining

(regulatory) additionality and setting robust crediting baselines for Article 6 activities. However, there are some key challenges with NDC implementation plans in that they do not have a common format; require strong national ownership and coordination across sectors and actors; and are not required to be publicly available. Improving the transparency and clarity of NDC targets is crucial for ensuring that Article 6 activities go beyond current NDC targets and contribute to higher ambition.

Transparency on the estimation of **mitigation costs** is crucial for differentiating between mitigation measures that can be mobilised through international and domestic carbon markets, international climate finance, or domestic means. Estimation of mitigation costs also informs the development of a country's **funding strategy**. The disclosure of mitigation costs and funding strategies provides much needed clarity to buyer countries when engaging with a host country.

Article 6 cooperation can also be promoted by disclosing information on **technology** needs and availability as well as **sectoral strategies**. It attracts interested buyers to support the best available technologies and foster transformational changes within a sector. This information is also necessary for setting baselines and determining additionality.

During the development of an NDC implementation plan, it is recommended that guiding principles of Article 6, Article 6 institutional framework and a robust monitoring system are embedded in the plan.

Insights on the role of NDC implementation in Article 6 cooperation

The SEA views NDCs as an important statement of political will which indicates the level of ambition of the host country. This is also likely true for host countries, who evaluate the acquiring country's ambition on basis of the NDC. Thus, the NDC provides a foundation for the collaboration and assists in the evaluation of potential partners. Not surprisingly, the NDC is one of the primary criteria the SEA uses to evaluate a potential partner country, besides political will, capacity for the cooperation and general suitability for Swedish cooperation.

It is important to remember that NDCs will be updated and therefore are dynamic in their nature. Building an earnest interest for cooperation and establishing mutual trust between countries is the most important parameter for successful Article 6 cooperation. Designing the actual cooperation as a win-win situation with clear outcomes for all participating countries is paramount.

When evaluating NDCs, the SEA looks at the general ambition, historical and current emissions, any partition into conditional and unconditional targets as well as the approach to Article 6 and designation of sectors for Article 6-cooperation. SEA also examines the degree of integration of Agenda 2030 into the NDC, i.e., if specific SDGs are highlighted, prioritized, as well as the potential of integrating these into the design of the activities.

The comprehensiveness and granularity of the NDC is another important feature the SEA considers. If sufficient detail is provided in the NDC and the associated implementation plan, ambiguity is reduced and potential for constructive discussions on concrete action is increased. The

SEA's experience from analysing NDCs so far is that there is significant room for improvement here. A majority of countries are still struggling to make sense of how their own NDC will be operationalized and implemented to ensure fulfilment of targets.

Designing a "white list" that identifies the sectors or activities that the host country designates to be suitable for Article 6 cooperation facilitates additionality assessments as well as the discussions on activity selection with the host country. Up until the Glasgow decision, the market for Article 6 has been characterized by a shortage of both host countries and activity implementers, which also influences the discussion on activity selection. However, since then there has been a notable increase in interest from countries to participate in Article 6 cooperation.

At this early stage, the work is constantly evolving at the SEA, where internal processes are being developed and adapted on a continuous basis. Relying on our experience of over 20 years of bilateral and multilateral work under the CDM, analysing our internal processes from an Article 6 perspective has been a very fruitful journey. The role of sustainability in carbon markets, for example, is a prioritised area for Sweden and thus important to integrate into the design of our Article 6 purchasing programme.

After the decision in Glasgow, it became apparent that we all needed to align our national processes with the Article 6 Rulebook. For the SEA, this meant initiating a project to develop our national framework for Article 6 and we have dedicated resources for this internally. In anticipation of capacity building needs, we are working with our implementing partners to deliver capacity building, both on a theoretical and practicable level.



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The road ahead

To promote Article 6 readiness-building, we recommend the following:

- Actors participating in Article 6 cooperation need capacity building to enable strategic engagement, informed decision-making, and robust activities. Capacity building needs and efforts must be mapped to streamline and coordinate international support for Article 6 readiness and avoid the duplication of efforts. Capacity building relating to NDC planning and transparency contributes also to Article 6 readiness.
- Guidance can be developed for host countries to embed Article 6 into their “toolbox” for NDC implementation. Article 6 is an important means of implementation which can be utilised by countries for the achievement of their NDCs and increasing ambition in future NDC updates.
- Alignment of activities with host countries NDCs and long-term strategies can be ensured through approaches to determine whether an activity is additional to the NDC package and through setting crediting baselines that go beyond the NDC implementation pathways and are aligned with the long-term strategy. However, this requires revision and transformation of the methodologies used in carbon markets to date. The International Initiative for Development of Article 6 Methodology Tools (II-AMT, 2022) is developing an NDC guidance to allow host countries to assess how the proposed Article 6 activity

aligns with NDCs, NDC implementation plans and long-term strategies, while offering programme developers methodological guidance on how to ensure this (Michaelowa et al., 2022).

Regarding Sweden's Article 6 work, the coming year will be an exciting one. The SEA is in discussions with several partner countries on entering into legally binding bilateral agreements regarding Article 6 cooperation, some of which are at a very advanced stage, and which hopefully will be concluded during the year. These will provide proof-of-concept and serve as a signal to our political leaders that Article 6 cooperation is possible. At the same time, the SEA is developing the selection criteria and a process for identifying activities and has begun evaluating activities in parallel.

Domestically, the national framework for Article 6 is developed to deliver on the participation requirements for Article 6 in the Glasgow decision. Naturally, the anticipated decision in COP27 will inform this process, with guidance on how to approach corresponding adjustment and reporting tables.

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Sufficiently rigorous?

How to utilize forest carbon credits to achieve meaningful climate contributions

Forest projects activities have become an important project type in the voluntary carbon market in terms of volumes transacted and price level per ton. Furthermore, with the adoption of the Article 6 rulebook at COP26 in Glasgow in November 2021, the debate about the role of market-based forestry activities under Article 6 of the Paris Agreement gained new momentum. The crunch issues for integrity of forestry carbon credits are still the same as under the Kyoto Protocol. These are: How to address non-permanence and carbon leakage, how to define additionality and baselines, what are the environmental and social safeguards needed.

At the same time, the global community is increasingly aware of the need for political and financial solutions to protect and restore forests. High hopes are given in carbon markets to generate the needed finance. But are current market standards sufficient to ensure environmental integrity and are carbon credits the right financial source to generate the tremendous investments needed for fighting the drivers of deforestation? CMR discussed with two experts how carbon forest standards can be successfully implemented while ensuring environmental integrity: Mary Grady, Director of the Secretariat for ART TREES, and Axel Michaelowa, Senior Founding Partner of Perspectives. Introduction and questions by Malin Ahlberg, BMWK.

CMR: *Mary, looking at the development of voluntary and compliance carbon markets, what is the vision for ART TREES from your perspective?*

Mary Grady: All scientific studies that evaluate pathways to limit warming to 1.5 degrees by mid-century conclude that nature-based solutions – in particular the protection and restoration of forests – are critical to deliver near-term climate results at scale. Time is of the essence: This decade is crucial for ending the current high rates of deforestation and for conserving these stores of carbon that are irrecoverable in the timeframes to achieve net-zero emissions.

For forests to deliver on their massive climate impact potential, it will require mobilizing billions of dollars of additional annual investment from all sources, including from the private sector to protect and restore forests. Private capital flows through markets, and markets need standardization so that REDD+ credits are comparable among jurisdictions and fungible with emission reductions and removals from other sectors. And in order to attract private capital at scale, market participants need to have confidence in the integrity of the results.

That is why we created ART: To provide confidence needed in the environmental and social integrity of forest emissions reductions and removals to unlock new large-scale investments to protect and restore forests, rewarding countries that are delivering results. ART is a global voluntary carbon crediting program to register,



Mary Grady

Mary Grady has been active in environmental markets for almost 30 years, including 15 years at Winrock International. She is executive director of the Secretariat for the Architecture for REDD+ Transactions (ART) as well as executive director of the American Carbon Registry (ACR).

verify and issue high-quality REDD+ emissions reduction credits to countries and large jurisdictions. ART is a standalone program independent of governments or donor countries. It includes a streamlined, transparent process with standardized procedures for all Participants, governed by a Board of globally recognized experts and operated by an independent Secretariat.

Key to scale is that ART only credits governments at the national level and large subnational level. This matters not only for achieving results at scale, but also because working at a jurisdictional level helps to mitigate some of the key risks inherent in project-based REDD+ such as leakage and reversals. Jurisdictional-scale crediting also

provides incentives to governments in supplier jurisdictions to do what only governments can do: regulate land-use, enforce the law, recognize indigenous land rights, and implement green fiscal policies in the land sector.

ART is Paris Agreement-aligned in that TREES requires that forests be included in the country's NDC, addresses ambition through a regularly updated, conservative crediting level, includes fully-embedded Cancun-aligned environmental and social safeguards, and has measures in place to avoid double counting by requiring corresponding adjustments for any transfers of emission reductions and removals for use outside of the host country as required under Article 6. TREES also incorporates market elements that provide confidence in results including independent third-party verification and the issuance and tracking of serialized credits on a transparent registry. These requirements allow for TREES Credits to be fungible in markets with credits from other sectors and to attract finance at the scale needed to protect and restore forests globally.

CMR: *Axel, what is your view regarding the role of forest activities in the carbon market and specifically in the voluntary market?*

Axel Michaelowa: Forestry really has seen a roller-coaster ride in international carbon markets. While forestry activities were among the frontrunners of the concept of international carbon markets dating back to the late 1980s, the attitude of stakeholders became very critical in the early 2000s. Avoided deforestation was therefore excluded from the CDM, and a separate category of temporary credits was introduced for afforestation and reforestation to address the permanence risk. But credit buyers were not interested in temporary credits and therefore forestry always remained a marginal activity under the CDM. The situation reversed

in the late 2010s where forestry, mainly REDD+, now generates the lion's share of voluntary market credit volumes. The voluntary market had learned the lesson from the CDM and issued permanent credits, hoping that the use of buffer reserves would be sufficient to address reversal risks. Driven by the new framing of carbon dioxide removals and "nature-based solutions" private sector demand for forestry credits became robust and prices of forestry credits now exceed those of credits from other activity types. I have really been surprised by important NGOs that heavily attacked forestry in carbon markets in the 2000s but eagerly supported it 15 years later...

The roller-coaster nicely illustrates the forestry carbon market dilemma: if regulation is stringent regarding critical criteria such as permanence, forestry activities will not be attractive in a private market setting. If the regulators make compromises, forestry is a sector that can generate large volumes at low cost and is attractive for both sellers and buyers.

CMR: *For carbon markets, additionality is key to ensure environmental integrity. Within the carbon market community, there is an ongoing discussion whether credits that reward High Forest-Low Deforestation (HFLD) jurisdictions for protecting their forests are additional. Those who argue against HFLD credits in the carbon market are of the opinion that the credits are not linked to emission reductions and thus should not be*



Source: AvigatorPhotographer / iStock / Getty Images Plus



Axel Michaelowa

Dr. Axel Michaelowa is co-founder of the think tank Perspectives and senior researcher at the University of Zurich. He has served as lead author in the 5th and 4th IPCC Assessment Reports.

used to offset emissions – since non-additional credits are threatening to undermine carbon market integrity, particularly the integrity of a compliance market. At the same time, some NGOs - such as the Wildlife Conservation Foundation and the Rainforest Foundation Norway - highlight that it is crucial to provide incentives for these countries to better protect rainforests, because many such forests are likely to experience increased emissions in the near-term future. Mary, how can the HFLD approach under ART TREES guarantee real emission reductions from your perspective that meet the additionality requirements of existing carbon markets?

Mary Grady: ART includes a crediting approach for High Forest - Low Deforestation (HFLD) jurisdictions in addition to crediting for reducing emissions from deforestation and forest degradation and removals to ensure opportunities for the full range of necessary actions needed for a broad range of forest countries and communities to contribute to Paris Agreement targets. By ensuring the continuum of climate action as eligible for participation in carbon markets, ART offers an incentive for jurisdictions to reduce deforestation, restore forests and ultimately become HFLD.

After all, it would be a perverse incentive to only allow jurisdictions that currently have high emissions to participate in carbon markets and not allow a pathway for jurisdictions and Indigenous Peoples territories that are taking actions to avoid forest-related emissions and therefore are not likely to benefit from a jurisdictional REDD+ crediting system that focuses only on reducing high levels of deforestation.

As related to additionality, it is incorrect that intact forests are not under imminent threat. Global demand for agricultural commodities, timber, fossil fuels, and precious and strategic metals, all of which are currently valued more than standing forests, continue to threaten forests. Published scientific projections are that future deforestation will extend into intact, high carbon forests, resulting in greenhouse gas emissions of an estimated 170 billion tons of CO₂ by 2050 (Busch & Engelmann, 2017), equivalent to four times annual global CO₂ emissions (2019). Passive protection of forests is no longer sufficient as infrastructure and extractive activities are rapidly extending into previously remote areas. Almost 97 million hectares of intact forest, equal to one-fifth of the global area of intact forest, currently lies within mining, oil and gas concessions.

HFLD crediting represents additional climate action because TREES requires that all HFLD jurisdictions have a REDD+ implementation strategy that establishes the actions they are taking and investments they are making to mitigate the drivers of deforestation and to support the maintenance of low deforestation rates, including the operationalization of forest monitoring systems and the enforcement of policies that improve forest governance. Also like all other ART participants, HFLD jurisdictions must report annual emissions from deforestation and degradation, account for leakage, uncertainty and reversals, avoid double counting and adhere to the same rigorous environmental and social safeguards requirements as for TREES Credits, yielding credits that are additional and fungible with those generated by the approach used for non-HFLD jurisdictions.

„HFLD“

High Forest–Low Deforestation (HFLD) is a concept to describe countries or jurisdictions that have a large amount of forest cover and low levels of deforestation in the past. Typical examples are Papua New Guinea, Guyana, or Suriname.

CMR: *Another crucial issue for forest projects is the question of how permanence is addressed within a forest standard to ensure integrity and provide assurance that the forest credit is qualitatively comparable with other credits. Mary, which measures are foreseen to monitor and potentially react to reversals that take place, after a jurisdiction / country leaves ART TREES? Specifically, how does TREES address a case that a country simply stops reporting in case of reversals, so that TREES might never be made aware in case permanence of its emission reductions is compromised?*

Mary Grady: Crediting at a large scale mitigates the risk of reversals of forest carbon stocks, which for jurisdictional REDD+ is defined as when reported annual emissions are above the crediting level of emissions from deforestation. Unlike at the project scale, a single fire or harvest event does not necessarily cause a reversal in a jurisdictional REDD+ program since forest carbon stock reversals in one area may be absorbed or netted out through performance reducing emissions and enhancing stocks in other areas.

TREES requires jurisdictions to contribute 5%–25% of credits to a buffer pool upon each issuance based on reversal risk. These credits are used to compensate for reversals. TREES annual buffer pool contributions are significant when compared with the annual percent of forest loss in key tropical forest countries. According to data from Global Forests Watch, while cumulative forest loss can occur, the loss occurs slowly over time – having trended under 1% annually for the past 15 years, and interannual differences are relatively low even during changes in governments. When a Participant leaves ART, their entire buffer pool contribution is retired to compensate for any future reversals that may occur. Given the trends in annual forest loss of under 1%, the Participant’s comparatively



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sizeable buffer pool contribution should conservatively compensate for any prospective reversals for decades into the future.

CMR: *Axel, what kind of provisions would you recommend to forest standards regarding permanence and would you make distinctions between jurisdictional and project-based approaches?*

Axel Michaelowa: The non-permanence risk really is the elephant in the room for forestry in carbon markets. It is a risk that cumulates over long periods and strikes in sudden, devastating events. A particularly challenging aspect is that continued climate change is likely to jeopardize forests, particularly in the tropics. For the Amazonian rainforest, a threshold for collapse may be exceeded in the next decades. Such risk can apply to entire biomes so a jurisdictional approach does not make a relevant difference here.

The now generally applied pragmatic solution to address reversal risks for forestry carbon market activities is a buffer reserve. Large voluntary market standards administer global reserves that dilute region-specific risks. However, the percentages of buffer reserves required under different standards vary widely, between 10 and 60%. ART TREES is at the low end of the range. High buffer reserves can become a pragmatic approach under compliance markets if linked to a really long-term monitoring that continues into the far future. Verra is mulling a hundred-year monitoring commitment; ensuring that this works will be a challenging task given the notorious short lifetimes of human institutions. One should note that even the largest companies on the New York Stock Exchange have an average lifetime of less than 50 years and this average is falling. How Verra will be able to mobilise the buffer reserves if a large-scale reversal hits many decades after the end of an activity and the activity developers have long ceased to exist remains completely open.

An important case to illustrate the challenge of keeping activities operational and monitored over many decades is the Noel Kempff forest protection project in Bolivia scheduled to run for 30 years. Being seen as a flagship forest protection activity in the late 1990s and early 2000s generating many million credits per year, it quietly vanished from the scene in the mid-2010s; its demise was never communicated properly.

The only means to fully address the permanence risk is temporary credits. But as happened under the CDM temporary credits are likely to lead to a chilling effect on the market.

An approach that had been discussed in academic circles in the early 2000s and that has recently been “resuscitated” is the “tonne-year

approach” where one calculates the equivalence between a greenhouse gas reduction and a temporary storage by a forest, given the natural decay of CO₂ from the atmosphere over long time frames. Such an approach would mean that a fraction of a permanent credit would be issued for each year of storage achieved until the equivalence period is reached. For an equivalence period of 50 years, the rate would reach 2% p.a. for a period of 200 years 0.5%. The challenge here is that estimates of the equivalence period vary widely, ranging from 45 to several hundred years.

The choice is crucial for the attractiveness in a carbon market context. Verra has recently consulted on whether tonne-year accounting should be possible for forestry credits on the voluntary market with an equivalence period of 100 years, meaning 1% of the total credit volume of an activity would be issued every year. If applied with safeguards to prevent “skimming off” short periods of “protection” of very large forest areas before their destruction, this approach would have merit. To be conservative, an equivalence period of 200 years and a minimum forest survival duration of 10 years throughout which credits would be located in an escrow account that would be forfeited in case of forest destruction could be applied. Obviously, this would have impacts on credit revenue flows that are skewed towards the future, not being attractive in situations with high interest rates.

To sum up – there is no solution to the forestry permanence conundrum that satisfies both environmental integrity and revenue generation needs of activity developers. Trade-offs exist and policymakers need to decide where to cut the Gordian Knot.

CMR: *The CMA.3 decision on guidance/rules for Article 6 of the Paris Agreement provides a robust framework for Parties to avoid double-counting, ensures environmental integrity, and promotes sustainable development. However, how forest activities will be addressed is still not clear: The SBSTA is requested to develop recommendations for COP27 concerning the issuance of ITMOs from emissions avoidance under Art. 6.2 and the Supervisory Body of Art. 6.4 is asked to provide recommendations concerning the inclusion of emissions avoidance and conservation enhancement activities. Mary, which kind of regulation do you consider as crucial on international level for compliance and other international purposes?*

Mary Grady: The Article 6 decisions taken at COP26 in Glasgow were critical to provide market clarity on Paris Agreement accounting and reporting requirements including the need for host country authorization and corresponding adjustments for transfers under Article 6 and for use in the CORSIA compliance market.

How forest activities will be included under 6.4 is indeed to be defined. However, we understand there to be no sectors or activities currently excluded under Article 6.2, and that jurisdictional REDD+ emission reduction and removals, such as ART-issued TREES Credits, are eligible for ITMO transfers.

Removing the ambiguity regarding the interaction between Paris Agreement requirements and the use of qualified emission reduction and removals credits for voluntary purposes has helped to attract new large-scale investments in REDD+.

CMR: *Axel, what do you consider as the most important issues that should be regulated on international level for forest projects?*

Axel Michaelowa: The fine print in the interpretation of “address reversals in full” will be decisive for the future of forestry under Article 6, at least in the context of Article 6.4.

Under Article 6.2, countries are free to define their cooperative approaches as long as they report properly. If countries are of the opinion that their approach holds merit, nobody can stop them, but they need to be aware of the potential damage to international carbon markets if NGOs attack them for applying approaches of low credibility. Under Article 6.4, the Supervisory Body will have to decide how to operationalize this requirement methodologically. If applied literally, “addressing reversals in full” would mean a temporary nature of ITMOs from forestry. As the appetite for this is rather limited, the question comes up whether buffer reserves or tonne-year accounting are the preferred way to go. If buffer reserves would be chosen, an international administration of a global Article 6.4 buffer reserve would have to be set up, and be perennialized for a century scale, a massive task. I would tend towards a conservative application of the tonne-year approach.

Another key challenging aspect is baseline setting for forest conservation. Again, under Article 6.2 countries will be free to choose their baseline, but trigger civil society criticism if they do it wrong. The Article 6.4 Supervisory Body needs to embark on an exercise identifying which forests actually are under pressure, for which parameters such as road access and pressure by different use types should be applied. Forests actually not under pressure would have a baseline emission of zero. The baseline principles guiding Article 6.4 such as being below



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business as usual and historical emissions and being in line with the long-term target of the Paris Agreement need to be respected by forest conservation baselines, which is clearly not the case for the ART TREES baseline approach for HFLD countries.

And last, but not least – additionality needs to be ensured. Just assuming that activities are additional because an approach is applied at a jurisdictional scale is a black box approach that is unacceptable. At least in the context of Article 6.4.

CMR: *Thank you very much for your contributions to this interview.*

References

- Busch, J. & Engelmann, J. (2017). Cost-effectiveness of reducing emissions from tropical deforestation, 2016–2050. *Environmental Research Letters*. 13, 015001. <https://doi.org/10.1088/1748-9326/aa907c>

CARBON MECHANISMS REVIEW

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