

Can self-regulation scale up carbon market trading and reduce emissions?

By: Dr. Steve Suppan

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Introduction

The Integrity Council for the Voluntary Carbon Market (ICVCM) is working to increase carbon dioxide emissions offset trading by improving the environmental and social integrity of tradeable carbon credits. The ICVCM is de facto an industry self-regulatory organization that writes and enforces its own rules and is functionally independent from government regulation. The ICVCM theory of change is summarized in the slogan “Build Integrity and Scale Will Follow.”¹ The endpoint for ICVCM is that a greater volume of trading “unlocks” private finance to invest in offset projects and emissions removal technologies, such as Carbon Capture and Storage (CCS), leading to a reduction in planet warming emissions. Since, as a recent Reuters investigation revealed,² public climate finance is often targeted to projects with little or no impact on reducing emissions, the ICVCM theory of change may find adherents in the host countries without effective and adequate public climate finance.

The ICVCM has a lot of resources with which to test its theory of change, develop its rulebook and monitor compliance with the rules. It is comprised of a 22-member Governing Board, a 23-member Expert Panel, an Executive Secretariat that serves the Board and Expert Panel, and a Distinguished Advisory Body of “around 30 world-renowned leaders from across the voluntary carbon market value chain who provide strategic insight and advice to the Board.” The Governing Board includes three elected market representatives and three representatives from Indigenous peoples and local communities in which carbon market emissions offset projects are located. There is a long list of Founding Sponsors, including the International Institute of Finance, the Ecosystem Marketplace, the Nature Conservancy and the City of London.³

The ICVCM introduced Part I of its rulebook about two months before the beginning of the United Nations Framework Convention on Climate Change (UNFCCC) meetings, June 5-15 in Bonn, Germany,⁴ which focus in part on Paris Agreement measures to implement the “market mechanism” outlined in Article 6.4. The Bonn meetings are taking place during a growing controversy about the opportunity costs, economic feasibility and risks of technologies to capture carbon dioxide emissions and store them permanently to achieve Paris Agreement objectives.⁵ ICVCM rules will apply to both land-based emissions offset credits and to credits derived from carbon dioxide removal and other “engineering based” technologies. Some of the ICVCM definitions, rules and procedures align with those of Article 6.

According to its “Summary for Decision Makers,” “The ICVCM seeks to help the VCM scale up [the transaction volume and value of tradable credits] by enabling participants in the market to more easily identify high-quality carbon credits. . . . These credits may then be acquired and used by entities to help manage their environmental commitments,”⁶ such as achieving corporate net-zero emissions by a target date. The ICVCM precursor, the Task Force on Scaling Voluntary Carbon Markets, claimed that “high integrity” labeled credits will scale up the value of VCM trading from the current \$2 billion annually to up to \$50 billion by 2030.⁷

The ICVCM rulebook is not complete: “This is the first in a series of key outputs from the Integrity Council during 2023. In Q2 we will publish Part II of the Assessment Framework which will contain our requirements for assessing categories of carbon credits, and open the application platform to interested carbon-crediting programs.”⁸ The definition of “categories of carbon credits” is complex, but includes credits derived from the same type of mitigation activity, e.g., renewable energy projects.⁹ Within the Part II requirements for categories of carbon credits are three that concern emissions impact of credits: additionality of the credit in reducing or removing emissions; permanence of the storage of emissions, including provisions for reversals of emissions stored, such as resulting from forest fires; and robust quantification of emissions for all credit types.¹⁰ These carbon accounting and crediting methodological requirements will have to take into account the Intergovernmental Panel on Climate Change’s (IPCC) conclusions, discussed below on the asymmetrical impact of removals on emissions.

As detailed below, the IPCC concluded that emissions are not offset by land-based removals on a one-to-one ratio, which will complicate the ICVCM carbon accounting and crediting rules. Although we await Part II requirements and subsequently planned “continuous improvement,” there is ample material in Part I for comment. This short review of the first phase of ICVCM documents summarizes a few sample rules and procedures required of carbon credit certification programs to improve credit quality. The Part I rules leave placeholders for what we believe are the more challenging to agree on and implement Part II rules. Indeed, the certification programs may decide that the rules, even if phased in, are too costly, difficult to implement technically and disruptive of their business model. Carbon market participants, accustomed to buying carbon offset credits at a cheap price, may decide that the price of higher integrity credits is too high to pay. What is the baseline for VCM improvement?

The VCM baseline: a lot to improve

A Carbon Direct analysis¹¹ of carbon credit and emissions offset project data from the comprehensive University of California Berkley “Voluntary Registry Offsets Database”¹² outlines the state of VCMs in 2022. Carbon Direct documents five major VCM problems, including a “quality problem with the continued proliferation of risky [offset] project types.” ICVCM’s rules and enforcement mechanism, applied to the carbon crediting programs on which projects are registered and from which tradeable credits are issued, proposes to reduce this proliferation. The Carbon Direct analysis also shows that credits issued for sale continue to outpace the retirement of credits that verify the quantity of emissions reduced by certified offset projects. (Long-term emissions removal projects have yet to result in retired credits.) The retirement problems primarily concern how buyers use the credits after they have been issued and how long the credits are held before the buyer retires them. The Voluntary Carbon Markets Integrity Initiative’s “Claims Code of Practice,” scheduled for release on June 28, will provide guidance to buyers on credit retirement and other buy-side VCM problems.¹³

The lead author of Bloomberg NEF’s research report, “Long-Term Carbon Offsets Outlook,” stated,

Today’s offset market, built mostly on bilateral transactions for cheap credits, is potentially digging its own grave . . . Buyers need transparency, clear definitions around quality and easy access to premium supply, or future years will resemble what we saw in 2022 [a stagnant year for credits issued and bought]. These changes will send demand signals to the projects making the greatest decarbonization impact and in need of the most investment.¹⁴

The ICVCM intends to revive VCMs through “clear definitions” that would promote a “premium supply” of high integrity credits.

Articulating rules from principles for carbon credit certification programs

On March 29, the ICVCM published its Core Carbon Principles (CCPs), the first phase of its Assessment Framework (AF), and its Assessment Procedure (AP).¹⁵ The 10 CCPs and their corresponding rules are fundamental requirements that carbon certification programs, such as Verra, must comply with by submitting information as required in the AF and as evaluated under the terms of the AP in order for a program's credits to receive a CCP label.¹⁶ Following the submission of required documentation, assessment and a decision by the ICVCM Governing Board, credit certification programs may be able to tag some of the credits on their registry with the CCP label.

ICVCM expects that increased integrity represented by the CCP labeled credits will attract more investors to voluntary carbon markets and will consequently "unlock" private financial flows for greenhouse gas mitigation projects. ICVCM estimates that "90% of all nature based solutions," i.e., land-based offset projects, are in developing countries.¹⁷ Those projects, together with technology-based removals, such as Carbon Capture and Storage, are expected to be supported by private finance (as well as by government grants, tax credits and subsidies). For example, in May, JP Morgan Chase, a financial services firm with \$3.7 trillion in assets as of March 2023,¹⁸ announced that it will invest \$200 million in carbon removal projects towards offsetting its operational emissions, a very small fraction of its overall financed emissions.¹⁹

An example of how rules are articulated from CCPs begins with the principle of "No Double Counting" of carbon credits. Rules derived from this principle would require certification programs to prevent various current forms of credit double counting that vitiate credit integrity and misrepresent the amount of emissions reduced or removed by an offset project registered by the program. An important AF rule, under the sub-principle of "no double use," addresses the problem of verifying the retirement of a credit: "The carbon-crediting program shall have registry provisions that prevent the further transfer, retirement or cancellation of a carbon credit once it has been canceled or retired."²⁰ Whether these provisions are adequate to comply with "no double use" will be judged according to the Assessment Procedure.

That AP judgment will be complicated by the chain of credit custody for which the ICVCM makes the certification program responsible. Most credit buyers prefer to do so bilaterally rather than multilaterally, i.e., through a multilateral trading platform, such as the Chicago Mercantile Exchange. In a bilateral purchase, a certification program facilitates the transaction between an offset project developer or a broker who has purchased offset credits and a credit buyer.²¹ A bilateral transaction and retirement of that credit are easily recorded on a program registry. However, to have a registry "provision" that monitors the afterlife of a retired or canceled credit probably requires the post-transaction accounting and auditing capacity of an exchange's clearing organization. In sum, operationalizing just one ICVCM rule to increase credit integrity could be very challenging for even a well-resourced certification program.

The ICVCM does not attempt to raise the quality of those credits that have been issued, bought and subsequently discovered to have overestimated emissions avoided or misrepresented emission reductions, such as have been discovered in academic,²² journalistic²³ and NGO²⁴ investigations. ICVCM does not verify independently the integrity of individual offset projects or credits deriving from them.²⁵ (There are organizations, such as Calyx Global, which review individual projects to rate in aggregate the integrity of project type credits, e.g., reforestation-based credits, for prospective investors.²⁶) However, the Integrity Council will conduct "spot checks and sample-based auditing of CCP eligible programs and

credits” as part of its performance monitoring to provide integrity assurance to credit buyers.²⁷ Certification programs are required to have a third-party validation of offset project design documents and verification of project developer reporting, “including systematic review of validation and verification activities, reports and remedial measures to address performance issues.”²⁸ If the certification program fails to resolve problems with third party validation and verification, ICVCM can suspend or terminate the program from having its credits tagged with the CCP label.²⁹

Carbon credits of the future: safeguarding human and land rights in offset projects

ICVCM focuses resolutely on future credit quality and future VCM investors. It sets out carbon credit certification program level requirements whose documented compliance will qualify the program to receive the CCP label for a specified category of credits. What kind of integrity assurance will the buyer of a CCP labeled credit receive? Consider the problems of credit value and reputational risk for buyers of credits derived from projects whose developers have violated human and/or land rights in the project territory and whose governments are unable or unwilling to discipline such violators.³⁰

Human and land rights are a subset of issues addressed under the seventh CCP, “Sustainable Development Benefits and Safeguards.” Some of the AF requirements to increase credit integrity by preventing violations of land rights and human rights by offset project developers can be characterized as binding but with important qualifiers. For example, “The carbon-crediting program shall require mitigation activity proponents to ensure that the mitigation activity avoids, or where this is not feasible, minimises forced physical and or economic displacement.”³¹ The feasibility of avoiding forced displacement is a tacit admission that if a government does not enforce human and land rights in a project area, the “mitigation proponent,” whether a private or a public entity, cannot be compelled to do so.

However, if forced physical or economic displacement may occur, “The carbon-crediting program shall require that mitigation activity proponents confirm in validated design documents . . . whether the mitigation activity results in forced physical and/or economic displacement.”³² Buyers of CCP labeled credits derived from projects that result in forced displacement will know in advance that displacement was disclosed, not by journalists, academics or NGOs, but by project developers and funders at the design stage of the project. In other words, the likelihood or certainty of forced displacement is disclosed to the certification program before the certification program accepts the project on its registry of projects. Such buyers, of course, will be responsible for conducting their own due diligence about design documents the developer provides to the certification program.

The ICVCM “Disclaimer” states,

No representation, warranty or undertaking, express or implied, is or will be made by the Integrity Council, its advisers or any other person as to the truth, accuracy, completeness, correctness or fairness of the information or opinions contained in this document and any reliance you place on them will be at your sole risk.³³

A buyer of such a credit is precluded from litigating against the certification program because the displacement, however injurious to those displaced, was disclosed prior to project implementation, if the carbon crediting program complies with this requirement. It is not clear whether holders of CCP labeled credits will face less likelihood of litigation than is the case for corporations that claim to offset their emissions with carbon credits and/or make advertising claims of “carbon neutrality.”³⁴

Under the criterion of “Assessment and management of environmental and social risks,” certification programs are required to ensure that “mitigation proponents” (offset project developers and their funders) provide safeguards to manage identified risks. For example, to prevent projects that might ignore or violate the rights of Indigenous Peoples (IP) and Local Communities (LC) in a project area, the ICVCM requires that certification programs requires that a project developer “ensures FPIC [Free Prior and Informed Consent] processes for IPs and LCs, where applicable; and conduct stakeholder consultations, including local stakeholders as part of project design and implementation in a manner that is inclusive, culturally appropriate, and respectful of local knowledge, take these consultations into account and respond to local stakeholders’ views.”³⁵ Again, the “where applicable” qualifier for FPIC will determine if this requirement is binding or not on a certification program. If project developers and investors complied with this credit certification requirement and other safeguards, certification programs would be able to issue CCP labeled credits, signaling higher social integrity to prospective buyers.

A May 22 webinar sponsored by the German Environmental Agency considered the question “What can the [Paris Agreement] Article 6.4 [carbon market] mechanism learn from integrity issues in the VCM?” (A link to the webinar has not yet been posted.) This is a novel question. Most of the presentations concerned problems of environmental integrity, e.g., misrepresentation of emissions reduced from a baseline, and proposed safeguards to reduce the likelihood that integrity problems would plague the Article 6.4 implementation. However, the risks of offset projects to human and land rights and the ICVCM safeguards required of certification bodies, briefly summarized above, should be considered by the Article 6.4 Supervisory Body when it develops a concept paper later in 2023 for engaging with the Local Communities and Indigenous Peoples Platform (LCIPP).³⁶

IATP wrote to the Supervisory Body in February to urge it to change its work plan to not make a recommendation for a decision by the 28th U.N. Framework Convention on Climate Change Conference of Parties (COP28) on technical issues concerning emissions removals before it recommended how to safeguard the human and land rights of communities and Indigenous Peoples resident in offset project areas.³⁷ We did not persuade the Supervisory Body to alter the schedule of its work plan. However, the Integrity Council safeguards for human and land rights might be a measure that the Supervisory Body could incorporate in the concept paper that is to advise government delegates at COP28.

ICVCM Part II challenges

The anticipated revision of Part I rules includes how frequently certification programs should update their methodologies for quantifying emissions reduced or removed in their registered credits. That revision also will specify how different greenhouse gas emissions with different global warming potentials should be calculated in terms of the CO₂ equivalents used as a commodification metric in emissions offset contracts.³⁸

Since ICVCM intends to develop its standards with “the best science and expertise available,”³⁹ developing Part II rules concerning the emissions impacts of different categories of certification program credits presents a great challenge. Rules and methodologies concerning the degree of permanence or durability of emissions reductions and removals in credit types; concerning the additionality of those reductions and removals relative to an emissions baseline validated independently prior to offset project registration by the certification program; and further issues about “robust quantification” are yet to be finalized in Part II.

The consensus state of climate science, as presented by the Intergovernmental Panel on Climate Change (IPCC) reports and separately by research from individual member scientists of the IPCC, indicate the scale of the challenge for agreeing on certification rules for offset projects that temporarily store emissions. In 2021, the IPCC concluded with “medium confidence” that fossil fuel emissions cannot be offset on a one-to-one ratio by land-based (biogenic) emissions sequestration.⁴⁰ (Chapter 5.6.2.1) A short summary of that asymmetry is described in a 2021 *Nature Climate Change* article based on computer modeling findings:

Results indicate that a CO₂ emission into the atmosphere is more effective at raising atmospheric CO₂ than an equivalent CO₂ removal is at lowering it, with the **asymmetry increasing with the magnitude of the emission/removal**.⁴¹ (IATP emphasis).

The asymmetry ensures that it is scientifically impossible to offset an equivalent amount of fossil fuel emissions with an equivalent amount of biogenic removal. How can Part II rules incorporate this asymmetry into emissions accounting and crediting methodologies?

For example, how will the ICVCM develop category of carbon credit level requirements on permanence, additionality and robust quantification to take into account, per Carbon Market Watch, that “A tonne is not a tonne - and the proposed straightforward equivalency between each tonne emitted and each tonne removed is false”?⁴² If the Part II ICVCM requirements allow programs to issue credits in contractual terms that incorporate this false equivalence, there will be no improvement in environmental integrity at all. If buyers of such credits claim that purchase of credits representing tonnes removed compensates for equivalent tonnes emitted by their facilities and supply chains, the buyers could be at risk of litigation, even if the certification programs had complied with the ICVCM requirements.

Will the ICVCM “robust quantification” rule include a requirement for programs to discount claims of emissions reduced in land-based project credits? Assuming that, according to the president of the COP28 negotiations, “fossil fuels will play a role in the foreseeable future,”⁴³ will a discount be calibrated to include the increasing magnitude of the asymmetry between emissions and removals? Will the retirement of the credits incorporate an asymmetry- referenced emissions reduced or removed discount?

Part II rules for permanence, additionality and robust quantification may be clearer and easier for certification programs to apply for credits derived from engineering-based removal projects than for land-based emissions reductions. But there is reason to doubt that these engineering-based removals will perform reliably and at scale on a commercial basis to permanently remove greenhouse gases from the atmosphere.

UNFCCC member governments and corporations (non-Parties) are planning to increase fossil fuels exploration and production.⁴⁴ The fossil fuel industry is a main beneficiary of billions of dollars of U.S. tax credits to build Carbon Capture and Storage (CCS) facilities and pipelines, one of the main engineering-based removal technologies discussed in the Secretariat Information Note that is to inform Article 6.4 Supervisory Body deliberations.⁴⁵ Since the advent of CCS 50 years ago, successive iterations of the technology have never managed to perform at a scale and for a cost promised by its promoters.⁴⁶ If government financial and policy backing for CCS technologies to permanently store in stable geological formations the increased fossil fuel emissions planned for the “foreseeable future” results in technological success, certification programs will issue credits derived from CCS and other technology-based projects. However, according to the Secretariat Information Note, “Land-based activities currently provide most of the removals and are expected to be the main driver of removal in the near-

term (i.e., to 2030) and possibly even until 2050.⁴⁷ However much the ICVCM may want to write Part II rules for the still unproven future of engineering-based offset credits, it must write rules to enable certification of credits from land-based offset projects that buyers will recognize as having a higher degree of integrity than what is now on the market.

Part of the challenge to improve future credit integrity is that nearly all credits issued by certification programs are based on projects that temporarily store greenhouse gases, so establishing “permanence” requirements for different credit types is about stipulating temporary storage periods relative to the persistence of greenhouses emitted. ICVCM Part I requirements do not allow certification programs to issue credits derived from emissions avoidance projects, which is an improvement on credit integrity. Avoidance emissions project developers have an economic incentive to set hypothetical baselines that greatly overestimate future deforestation and/or afforestation contributions to emissions reductions. Emissions avoidance projects credits have the lowest environmental integrity, as a category, among investigations of projects and certification protocols.⁴⁸

However, avoided deforestation projects and renewable energy projects accounted for 77% of credits issued and 79% of credits retired in 2021, according to Carbon Direct’s state of carbon markets report in 2022. The higher integrity VCM of the near future depends on program compliance with ICVCM rules applied to the certification of offset projects that temporarily store carbon because permanent removal credits do not yet exist. Per Carbon Direct,

Pure removal projects made up only 3% of all projects issuing credits over 2021 and 2022 YTD [Year to Date], while projects that tend to include a mix of removals and reductions represented 13%. No credits were issued in 2021 for durable removals, the only type of offset that can effectively cancel the impacts of carbon dioxide released into the atmosphere in a functional reversal of emitting carbon dioxide.⁴⁹

The long-term future of carbon offset markets depends partly on the technologically and financially successful development of commercial scale carbon removal technologies and partly on the willingness of market participants to signal with investments their confidence in the technologies even before the carbon removal credits have been issued, indeed, even before facilities from which those credits are derived have been built. For example, a U.S. based carbon dioxide removal [CDR] company that has not yet built its CDR facilities announced in April a sale of its future CDR credits to NextGen, a joint venture of Mitsubishi and South Pole, the largest European carbon credit broker dealer, “as certified under standards by the International Carbon Reduction and Offset Alliance [ICROA].”⁵⁰ This company is among several to benefit from huge financial support in the Biden administration’s “Inflation Reduction Act of 2022,”⁵¹ thus de-risking with U.S. taxpayer funds NextGen’s future purchases of Summit Carbon Solutions future CDR credits.

The Assessment Procedure and the program uptake of the ICVCM requirements

The Assessment Procedure (AP) outlines the ICVCM governance structure and how the AP will work to review certification program documentation to respond to the AF requirements, work with the certification program on its application to have its credits receive the CCP label and recommend a decision on the application to the Board. The AP practice attempts to balance the imperative of maintaining the integrity of the AF and the CCPs while not making the application process so stringent that there is little uptake among the certification programs.

Although the documentation requirements are extensive, the AP is clear, ensures confidentiality of documents submitted⁵² and provides for ICVCM communication with the applicants. Each program will

assess the costs of complying with ICVCM requirements and their subsequent updating against the benefits of the CCP label, e.g., in increasing the price of credits issued, reduced risk of litigation concerning the CCP labeled credits and the program's reputation enhancement. The ICVCM AP likely will attract program applications because of its procedural clarity and predictability.

The ICVCM has tried to improve the quality of future carbon credits without disallowing the programs that had certified the low integrity legacy credits that overhang VCMs. At several points in the ICVCM Assessment Framework, the International Civil Aviation Organization's (ICAO) credit eligibility standard, Carbon Offset and Reduction Scheme for International Aviation (CORSIA),⁵³ is invoked as the benchmark for carbon credit integrity that the ICVCM would improve. For example, "In addition to CORSIA requirements related to governance framework, the carbon-crediting program shall..."⁵⁴ followed by several basic good governance requirements. These requirements include having a "robust anti-money laundering processes in place" and are "consistent with robust anti-bribery and anti-corruption guidance and regulation."⁵⁵

If certification programs were regulated by governments, these fundamental requirements would be mandated by government regulators as a condition of doing business. To improve carbon credit integrity in the voluntary markets, these requirements are mandated, among many others, for the programs' credits to receive the "high integrity" label. If a certification program has been accepted by CORSIA, the program is on the Assessment Procedure's fast track to having those programs' credits being tagged for trading with the CCP label,⁵⁶ if they comply with the other ICVCM requirements.

Regarding methodologies for quantifying emissions temporarily reduced or permanently removed, carbon credit certification programs "may, at any time, exclude one or more of its methodologies from further assessment under this Assessment Procedure."⁵⁷ If a methodology, e.g., for soil carbon sequestration, is discredited as lacking environmental and accounting integrity,⁵⁸ the program can simply withdraw the methodology and the AP continues to review the program's other methodologies.

Once the ICVCM Governing Board decides that a program has satisfied its integrity requirements, the likelihood that the program will be suspended or terminated from issuing and selling CCP label credits is small, if only because of the VCM price and transaction volume destabilization that would ensue following a program's suspension, particularly if that program has a large market share. It is more likely that the CCP label could be withdrawn from one category of the program's credits, while the program remedied whichever non-compliance led to the suspension of the use of the CCP label on those credit types. The ICVCM provides extensive due process procedures and an appeals process, in the event of suspension and termination.

Conclusion

As noted above, Part I of the ICVCM rules have been published during controversy within the Paris Agreement negotiations about the economic and technological feasibility of the Carbon Capture and Storage technologies from which a significant part of the carbon offset credits of the future would be derived. However, the G7 governments have not only given their tacit support to the ICVCM project in the G7 environmental ministers' "Principles of High Integrity Carbon Markets,"⁵⁹ but have also invested in research and provided financial support to companies planning to build CCS facilities and pipelines to allegedly permanently remove the fossil fuel emissions resulting from new and increasing oil and gas production.

According to a recent article, “Global public investment in CDR research was around \$4.1 billion between 2010 and 2022 and investment in new CDR technologies was \$200 million between 2020 and 2022.”⁶⁰ But there is a huge and growing opportunity cost to invest in CCS technologies and carbon credits. A co-founder of the first private company dedicated to CCS development and operations wrote recently, CCS “allow[s] for the continued production of oil and natural gas at a time when the world should be ending its dependence on fossil fuels. . . every dollar invested in renewable energy — instead of C.C.S. power — will eliminate far more carbon emissions.”⁶¹ Governments may ignore the opportunity cost of CDR technologies in order to provide the technological means to enable what they hope is a less disruptive transition to a low carbon economy that maintains a certain political order. However, basing the VCMs of the future on carbon credits derived from these technologies still faces facts of climate science that cannot be ignored without risking our collective future.

As summarized above, recent climate science demonstrating the asymmetry between emissions emitted and emissions removed will pose significant challenges to the development of Part II credit level requirements based on “the best available science and expertise.” These Part II rules include certification program requirements for “robust quantification” of emissions represented in program credits; rules on the relative permanence of emissions reduced or removed in projects registered by the program; and rules on setting baselines from which emissions reduced or removed will be calculated. If the Part II rules do not incorporate quantitatively the asymmetry between emissions emitted and emissions removed in carbon accounting and crediting methodologies, the promise of higher environmental integrity credits will not be fulfilled. If the Part II rules incorporate asymmetry, particularly into “robust quantification,” certification programs will have to inform prospective buyers in contract language that the credits they buy do not offset or compensate for buyer emissions on a one-to-one ratio. If buyers cannot use CCP labeled credits to make “net zero” claims, will they still buy and trade these credits to scale up VCMs?

However, the ICVCM Assessment Procedure offers clarity, predictability and due process to credit certification programs, all of which could facilitate uptake of the Part I and Part II rules. But that uptake may not result in scaling up VCM trading if compliance with the requirements results in meager emission reductions and a contribution towards increasingly unbearable climates. Furthermore, the pace of uptake of ICVCM surely will lag the direct climate action required to prevent global warming from exceeding the 1.5°C above pre-industrial level Paris Agreement target. According to a Financial Times summary of a June 8 scientific article updating the IPCC 6th Assessment Report,⁶² global emissions reached an all-time high in May, with a dramatic reduction in the remaining global emissions budget before the 1.5°C target is overshoot.

At the current trajectory of increasing emissions, we have six years to prevent overshooting. According to the lead author of the *Earth System Science Data* article, “We need to change policy and approaches in light of the latest evidence about the state of the climate system.”⁶³ An information gap between the latest climate science and climate-related policy, including the ICVCM rulebook, will persist. But if the ICVCM rulebook and the carbon credit certification program are to establish a reputation for scientific integrity, the ICVCM “continuous improvement” process will have to update rules according to the latest climate evidence, even if that evidence results in rule modifications that do not foster scaling up of carbon market trading.

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