NATURE MARKETS

Governing Carbon Markets

April 2022

CLIMATE ADVISERS

FINANCE FOR BIODIVERSITY Initiative

Governing Carbon Markets

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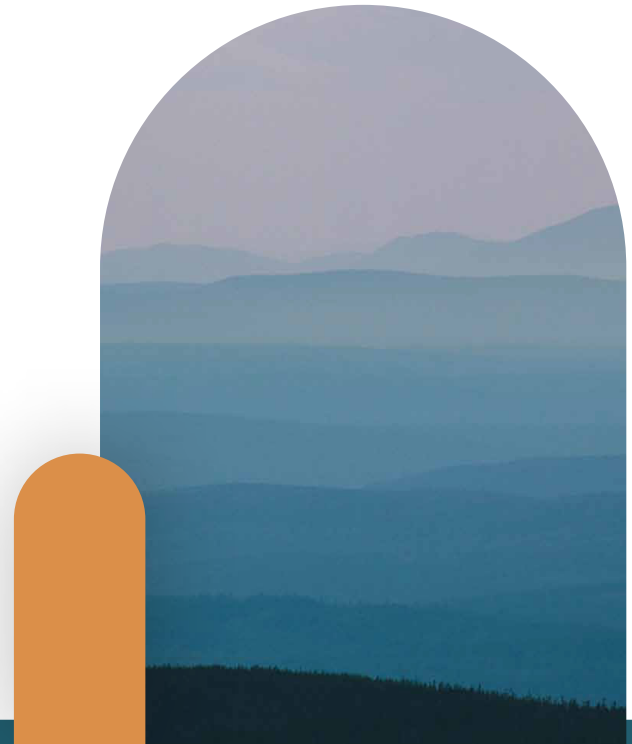

About FINANCE FOR BIODIVERSITY Initiative

F4B's goal is to increase the materiality of biodiversity in financial decision-making, and so better align global finance with environmental conservation and restoration.

Our work on nature markets draws from the entirety of our portfolio, which is organised across five workstreams:

- **Market efficiency and innovation:** including a leadership role in the Taskforce on Nature-related Financial Disclosures (TNFD), and support to several data- and fintech-linked initiatives.
- **Enhanced liability:** extending the legal liabilities of financial institutions for biodiversity outcomes, including innovations such as legal personhood for nature.
- **Citizen engagement:** public advocacy, campaigning and advancing digital approaches to catalysing shifts in citizens' financing behaviour.
- **Public finance:** advancing measures and advocacy linked to stimulus and recovery spending, and the place of nature in sovereign debt markets.
- **Nature markets:** catalysing nature markets by developing new revenue streams and robust governance innovations.

F4B has been established with support from the MAVA Foundation, which has a mission to conserve biodiversity for the benefit of people and nature. F4B's work benefits from partnership with, and support from, the Children's Investment Fund Foundation (CIFF) and the Gordon and Betty Moore Foundation through The Finance Hub.

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Taskforce on Nature Markets

This paper is linked to the work of the Taskforce on Nature Markets which aims to shape a new generation of purposeful nature markets that deliver nature positive and equitable outcomes. To deliver this objective, the Taskforce seeks to build awareness of nature markets, develop communities of practice, encourage innovations, establish a roadmap of recommendations for key actors, and create a number of exemplary pathfinder initiatives.

Find out more by visiting **www.naturemarkets.net**

*The members of the Taskforce on Nature Markets participate in a personal capacity. This paper is not endorsed by Taskforce members or their institutions.

About CLIMATE ADVISERS

Climate Advisers works to strengthen climate action in the United States and around the world through research, analysis, public policy advocacy and communications strategies. We partner with governments, non-profits, philanthropies, international organizations, financial institutions and companies to help deliver the clean economy. We develop and promote sensible, high-impact initiatives that improve lives, enhance international security and strengthen communities.

Summary

As the first globally viable nature markets, carbon offset markets are a crucial test-case for whether market mechanisms can achieve non-financial ends such as mitigating climate change. Prices and expectations are booming after climate negotiators at Glasgow's COP26 agreed on the rules for operationalising Article 6 of the Paris Agreement, and the private sector Taskforce on Scaling Voluntary Carbon Markets (TSVCM) has handed off its mandate to the Integrity Council for the Voluntary Carbon Market (IC-VCM). But doubts remain about the effectiveness and the legitimacy of such markets.

Nature markets – a category that includes nature-based carbon offset markets but is rapidly growing to include many other ecosystem services – require stronger and more innovative governance than the typical financial market. That is because rather than simply provide private goods through the self-interested actions of individuals, the raison d'etre of a nature market is to fulfil a public purpose – whether that be greenhouse gas emissions reductions, biodiversity protection, or conservation. Only if investors, NGOs, regulators, and the public trust that the market can deliver in the public interest will it attract and sustain the levels of liquidity that would make the market an important tool in humanity's efforts to move civilisation back within planetary boundaries – and return value to investors.

Carbon markets were invented to fulfil the public purpose of reducing greenhouse gas (GHG) emissions from the atmosphere at the lowest possible cost. While emissions trading schemes operating under a cap, such as the EU ETS, have to date been successful in driving emissions reductions and reducing compliance costs, project-based carbon markets have failed to scale into a credible, mature financial market because they have suffered from a lack of trust and perceived legitimacy. Now, unprecedented efforts are racing to build that trust in the hope that offset markets can direct billions in new private-sector funding to the preservation or regeneration of ecosystems and the deployment of decarbonisation technologies.

One key initiative is the IC-VCM, the goal of which is to "set and enforce definitive global threshold standards, drawing on the best science and expertise available, so high-quality carbon credits efficiently mobilize finance towards urgent mitigation and climate resilient development." By creating the Core Carbon Principles, accompanied by an assessment framework, standardised contracts and market facilitation, the IC-VCM aims to lay the foundation for a viable, high-integrity voluntary market. This is crucial work, without which voluntary carbon markets cannot succeed at scale, and it also provides a strong foundation on which compliance markets can build.

But the existence of those standards and principles won't be sufficient to imbue carbon markets with trust and perceived legitimacy. Carbon markets are sprawling and complex; they involve actors and projects in many sectors all over the world, some poorly regulated and many with incentives that run counter to the public purpose of carbon avoidance and removal. With demand for carbon credits high, and money flooding into the market, opportunities abound for unscrupulous behaviour, from sloppy verification to outright fraud.

That means that - in addition to well-designed standards - there must be a comprehensive governance system to ensure they are implemented with fidelity, and that the market's public purpose is not subsumed by private interests. In practice, the governance system must enable constant, systemic oversight and assessment, and meaningfully involve the local communities and other stakeholders directly affected by projects and trading. Authorities (such as the Paris Agreement's Article 6.4 Supervisory Body and the IC-VCM Governance Body) that govern purpose-driven markets should design that governance around three core principles that together can ensure that the agreed public purpose remains at the core of the market:

Whole-system governance. The governance system must see the big picture and connect with every level of the value chain, as well as with the broader market ecosystem outside of its institutional domain. This means prioritising the market's public purpose, establishing systemic oversight, and conducting regular impact assessments.

Complete transparency All information pertaining to the market and its procedures must be open and publicly available so as to ensure the integrity of projects, transactions, and market outcomes.

Inclusive participation. All key market stakeholders — especially Indigenous Peoples and other frontline community members — must have the opportunity to participate fully in the governance of the market. That means key stakeholders are meaningfully represented in governing bodies, have power to contribute to the design and oversight of both the market and individual projects, and have effective channels for their grievances to be addressed.

Implementing these principles is financially and technically feasible. New technologies and services have brought down the costs of transparency and inclusion. At the same time, changing attitudes among investors, employees, governments, and citizens – to say nothing of the escalating damages and disruptions caused by climate change – are raising the price of insufficient action.

The failure of carbon markets would be disastrous on multiple fronts. It would slow humanity's path to net-zero GHG emissions and derail financial innovation in other ecosystem services. And carbon markets will, for good or ill, provide the template for a wide range of markets in the deteriorating ecosystem services that Mother Nature has for so long provided for free. They are the first nature market, and a pivotal test case as to whether market mechanisms can achieve non-financial environmental goals. We must get them right.

This paper explains in depth and with real-world analogues the imperative for governors of carbon markets, and other nature markets, to adopt these three design principles. It focuses specifically on the IC-VCM as the most advanced large-scale initiative, but the arguments apply to all purpose-driven markets. In the conclusion, it suggests next steps, including further IC-VCM work to operationally develop the tools of good governance recommended in this paper.

1

Introduction

Humanity's impact on the biosphere is the defining challenge of our time. Every dollar, every job, and every community depends on the bounty of the natural world and the stability of its climate and ecosystems. The rapid degradation of nature imperils not just the global economy but the survival of the human species. This situation was not intended, but it is the inevitable consequence of an economic system based on markets and prices that neither understand nor incorporate ecosystem value.

The growing recognition of the devastating impacts of such mispricing is leading to an upswell of action seeking to link nature to economic and financial value. These 'nature markets' seek to properly price both the benefits that Mother Nature's ecosystems have long provided for free and the costs of humanity's misuse of nature, thus channelling investment toward the preservation of the natural world. Global finance tends to view climate and nature as risks; but if well-designed, nature - as expressed through markets and pricing - can present financial opportunity.

The first globally viable nature market is the trade in carbon credits or units. These markets allow a company or country to trade either units that represent permitted emissions of greenhouse gases or credits generated from projects that reduce or remove greenhouse gas emissions elsewhere. Although to date many such projects have been in technological areas such as renewable energy, increasingly carbon markets focus on nature-based solutions, such as conservation, restoration, afforestation and reforestation.

After years of false starts, carbon markets appear to have arrived at a watershed moment. At the United Nations Framework Convention on Climate Change (UNFCCC) COP26 in Glasgow in late 2021, climate negotiators agreed to a set of rules for cooperative action, including carbon trading, between countries (and with scope for private actors) under Article 6 of the Paris Agreement. At the same time, the multi-stakeholder Taskforce on Scaling Voluntary Carbon Markets (TSVCM) handed off its mandate to develop high-integrity carbon credit principles and rules for voluntary markets to the Integrity Council of the Voluntary Carbon Market (IC-VCM), led by a 22-member governing body. The IC-VCM now aims to ramp up the flow of funds, primarily from GHG-intensive companies, through carbon credit markets into carbon-saving and sequestering investments. These compliance and voluntary initiatives build on a huge range of efforts, such as the work of the CDM, ICAO, ART TREES, REDD+, and many existing carbon standards and registries.

These initiatives could result in the removal of gigatons of CO2 from the atmosphere and drive billions of investment dollars into offset projects that benefit communities and ecosystems more broadly. Or they could allow companies to delay emissions cuts and maintain the nature-destroying status quo. Given the intense and growing pressures on firms and countries to declare their adherence to the goal of Net Zero by 2050, well in advance of having strategies and systems in place to achieve that goal, many are now scrambling to figure out how to meet – or appear to meet – that commitment.[1] The outcome depends entirely on governance – what rules the markets follow, and how well those rules are implemented.

Carbon markets specifically and nature markets in general require stronger and more innovative governance than the typical financial market. That is because rather than simply providing private goods through the self-interested actions of individuals, nature markets exist to fulfil a public purpose – whether that be greenhouse gas emissions reductions, biodiversity protection, or conservation. Only if investors, NGOs, regulators, and the public trust that a nature market can deliver in the public interest will it attract and sustain the levels of liquidity that would make such markets an important tool in humanity's efforts to move civilisation back within planetary boundaries – and also return value to investors.

Carbon credit markets have so far failed to scale into a credible, mature financial market because that trust and perceived legitimacy have been lacking. Concerns raised over the years include:

- The non-additionality, impermanence, and inflated baselines of projects – together with emissions leakage – that mean that net emissions continue to grow;
- Market fragmentation;
- Inconsistent GHG accounting;
- Host communities not receiving project revenues and other benefits; environmental and social damage from projects too narrowly focused on carbon reduction and/or removal at the expense of nature and society;
- Undermining of the rights of Indigenous Peoples and other local communities; and
- Voluntary action replacing or even undermining government policies and measures.

Although many voluntary carbon market (VCM) projects have generated meaningful GHG emission reductions and significant associated benefits, these concerns have created a simmering distrust in VCMs. At the core of all these issues is a fundamental disconnect between the market's activity and the public purpose.

We argue that bridging that disconnect requires carbon markets to demonstrate they can:

1. Sequester carbon and/or prevent additional GHG emissions above what would have happened anyway (the point of the market);
2. Protect and restore nature, and generate benefits to host communities (or the market could do more harm than good);
3. Engage all key stakeholders deeply (or project design, market monitoring, and credibility will suffer); and
4. Ensure trust (both within the market, and among the public in its view of the market).

Unprecedented efforts are now underway to demonstrate that VCMs can achieve those goals and gain trust and legitimacy. The Taskforce on Scaling Voluntary Carbon Markets, over the course of 2020, initiated the design work required to address these issues. Its successor, the Integrity Council for the Voluntary Carbon Market, is now creating a set of Core Carbon Principles intended to underpin a functional, legitimate global voluntary carbon market. It has given special attention to the standards, contracts, structures, and accounting and auditing procedures required for high-integrity product supply and efficient markets. It has also adopted a charter and a set of principles that include those called for in this paper: transparency, inclusive participation, and whole system governance.

These are essential building blocks for establishing, for the first time, truly global and effective carbon markets. VCMs can only become liquid at scale if they can harness private self-interest efficiently into the public service of mitigating climate change and protecting the natural environment – the basis on which governments, NGOs, and purpose-minded investors will assess any nature market.

But carbon markets are sprawling and complex; they involve actors and projects in many sectors all over the world, some poorly regulated. With demand for carbon credits rising and money flooding into the market, the incentives are high for unscrupulous behaviour, such as issuing credits for activities that do little to mitigate climate change, or even engaging in outright fraud. All of that means that even with well-designed standards, only governance that enables constant, systemic, and deep oversight and assessment, that meaningfully respects the rights of indigenous peoples and involves the local communities and other stakeholders directly affected by projects and trading will ensure voluntary carbon markets gain the trust and legitimacy necessary to reach meaningful scale.

In practice, ensuring the integrity of carbon markets – and of any nature market for that matter – requires an adaptive, evidence-based governance model based on a constant flow of credible information. That depends on transparency and oversight far beyond what is typical for market transactions, and a depth of stakeholder engagement that ensures that offset projects remain viable for many decades.

Thus, the governance of carbon markets should prioritise three principles:

1. **Whole-system governance.** The governance system must connect with and influence every level of the value chain, as well as with institutions in the broader carbon market ecosystem outside of its institutional domain, such as compliance markets and national governments.

2. **Complete transparency.** All information pertaining to the market, its operations and procedures must be open and publicly available, and easy to access.

3. **Inclusive participation.** All key market stakeholders — especially frontline community members — must have the opportunity to participate fully in the governance of the market, from project planning through impact assessment, and have meaningful and effective channels for their grievances to be addressed.

This paper explains how and why governance based on these principles will ensure the market grows rapidly, delivers on its public purpose, and helps move the global economy toward net zero. Only such governance will confer the credibility necessary to attract participants to both sides of the market, and to efficiently distribute financial, social, and environmental value to stakeholders. Adopting a governance model built around these principles is both technically and financially feasible; new technologies have dramatically reduced the costs of large-scale information collection and stakeholder participation.

Throughout this paper we focus on the IC-VCM in particular, owing to its preeminent role in voluntary carbon markets. But the three fundamental governance design principles apply to all carbon offset markets, and indeed to all nature markets, and other efforts to use market-based approaches to provide public goods. These are the principles that convert private interests to the public good.

If carbon markets fail to adopt a governance model that enables them to deliver on their public purpose, that failure will not merely dilute demand for projects that bring about emissions reductions that are additional, permanent, and protective against leakage and reversals – the usual and important focal concerns of the Integrity Council and other carbon market initiatives. It would also represent a missed opportunity with ramifications beyond climate change. Carbon markets will, for good or ill, provide the template for a wide range of markets in the rapidly deteriorating ecosystem services that Mother Nature has for so long provided for free. They could serve as an exemplar for the potential of nature markets, or stand as a glaring negative example that will deter their development. Carbon markets are the test-case for a large, important question: can market mechanisms deliver non-financial ends such as mitigating climate change and protecting nature?

2

Whole-system Governance

Carbon markets' governance system must connect with every level of the value chain, as well as with entities in the broader carbon market ecosystem outside its institutional domain.

In the years preceding the Great Financial Crisis of 2008, an increasingly complex financial system had developed for the US housing market. Mortgages with predatory terms offered to high-risk borrowers were securitised and made the basis of opaque secondary markets, in which the world's largest, most connected and most important financial institutions had massive, highly-leveraged positions. It was this complexity that allowed a crash in home prices to metastasize into a global crisis that wiped out trillions of dollars of value, left tens of millions jobless, and spawned social and political upheavals that continue to disrupt societies to this day.

At the time, each of the components in this system was subject to oversight. But the regulatory agencies in charge were focused on their own domains, on the lookout for risks to individual institutions. No governance body had a view of the other players, an understanding of how the pieces were connected, or a mandate to oversee systemic risk.

Why whole-system governance

Like the US housing-financial system, nature markets are complex systems. Carbon markets include forest managers, project developers, verifiers, traders, multinational corporations, average citizens, and a host of other participants. These participants span geographies, jurisdictions, and sectors, and, like the molecules in the atmosphere that produce weather, interact with one another to generate inherently unpredictable outcomes. Yet unlike the disinterested forces that generate weather, market participants have competing interests over rights and rewards that may lead them to actively work against one another. Therefore, governing in ways that ensure alignment around the purpose of public purpose markets is both challenging, and essential.

Moreover, the voluntary market is part of a larger ecosystem. It is connected to and affected by a dizzying array of different organisations, markets, and other entities outside its jurisdiction: commodities and land markets; the political and regulatory regimes of dozens of nations (some volatile with weak governance standards); national and supranational carbon compliance markets; and the international climate change apparatus under the Paris Agreement. And again, all of these may have competing interests that must be aligned, not just in the ways all markets must align between buyers and sellers, but around the public purpose the market is meant to achieve. This complexity of competing interests is not sufficiently captured by price mechanisms for purpose-driven markets – which is why its governance needs to be designed with far greater inclusion, transparency, and oversight of the full system in which it operates.

The new VCM governance system will need to have both oversight of the VCM value chain and an eye to the entire carbon ecosystem. Without this kind of systemic vantage point, it will be impossible to know whether the market is fulfilling its public purpose of reducing carbon and protecting nature; whether speculative money is flooding into unstable carbon markets or secondary markets and generating risks to financial stability; and whether changes in other parts of the system — such as in compliance markets or Article 6 of the Paris Agreement — will disrupt or threaten the voluntary market. The reverse is also true: an effective, high-integrity, and well-governed new VCM will be able to influence the broader carbon market and help steer the compliance and voluntary markets toward convergence.

Whole-system governance in the new voluntary carbon market

Whole-system governance requires that the authorities governing voluntary carbon markets, such as the IC-VCM:

1 Govern the supply side with public purpose at the core using the best tools of good governance. The IC-VCM has set out to establish the boundaries for acceptable practices and standards for registries, exchanges, and OTC trades, with adherence proposed to be enforced by excluding violators from its imprimatur. However, this may not be sufficient. For it to succeed in this voluntary self-regulation of a purpose-driven market, it is, appropriately, creating at its core a multi-stakeholder platform, the only way in which it can have the legitimacy and knowledge needed to play such a role despite its lack of hierarchical authority. In so doing, it should draw on the lessons learned from recent decades of often challenging experience with multi-stakeholder processes that aim to bring diverse actors together to solve a shared problem. And, to ensure that participants are honouring those boundaries and serving the market's public purpose, the IC-VCM must design and make effective use of the transparency and inclusion tools described in the following sections of this paper.

2 Govern with the carbon market value chain in mind and connect to the broader carbon and project development ecosystem. That means supply-side actors, demand-side actors, and all the brokers, exchanges, and secondary market participants in between. In addition, the voluntary carbon market governance bodies must have connections to other platforms, including corporate-accountability and target-setting platforms such as the Science Based Targets initiative (SBTi) and Transition Pathways Initiative, Task Force on Climate-Related Financial Disclosures (TCFD) and the World Benchmarking Alliance, and to compliance carbon markets so that it can anticipate systemic changes. The form of these connections will vary from organisation to organisation but in every case must foster open, two-way dialogue and coordination.

3 Conduct ongoing impact and performance assessment to ensure the market is fulfilling its public purpose. The IC-VCM should oversee a governance network that is decentralised enough to allow for assessments at all levels of the value chain, with information protocols that guarantee that assessment and performance results reach governance body directors quickly, regularly, and in a form that enables action. Impact assessments should be quantitative and qualitative, and evaluate performance and integrity using a rigorous and reputable framework. Development of that framework should be a high priority.

Feasibility

The multistakeholder approach to voluntary transnational governance has emerged in many domains, from global health, to energy, to humanitarian relief, in what has become a massive expansion of such initiatives over the past few decades. The multistakeholder approach – in which government, civil society, and private sector entities collaborate in a governance system that aims to address a specific problem or achieve a specific goal – was codified in the United Nations 2015 Sustainable Development Goals (SDGs), the globally agreed 2030 targets for human and planetary well-being. Indeed, one of those goals is an explicit statement of means that calls for the use of multistakeholder partnerships to govern collective action to achieve the SDGs. At the same time, other global initiatives and entities, such as the World Bank, have increasingly turned to market-driven mechanisms to provide public goods in such realms as agriculture.

Carbon markets, and the broader category of nature markets, will depend heavily on the quality of the multistakeholder collaboration needed for market mechanisms to accomplish public purposes. Achieving effective partnership across diverse actors is, to put it mildly, challenging. Despite the enormous potential and popularity of the form, experience to date raises numerous red flags. Hundreds of cross-sector partnerships were announced with great fanfare at the UN World Summit on Sustainable Development in Johannesburg in 2002, for example, with great hopes that these would be key to achieving the Millennium Development Goals. By 2016, most were "inactive, lack[ing] any outputs, or fail[ing] to match their stated ambitions with their observed activities."[2]

But lessons have been learned about the need to apply key design principles of systemic thinking, inclusion, and transparency to the governance of such partnerships. Multistakeholder initiatives succeed when they have a central platform that is laser-focused on the public purpose and that can (1) co-create a shared vision among all stakeholders, and (2) coordinate their activities, which includes bringing in missing links, creating space for safe collaboration, and reporting to all stakeholders.

For voluntary carbon markets, the IC-VCM aims to provide the core of the multistakeholder platform for a market-driven solution to a public problem. It can draw ample and ongoing lessons from the experiences of these similar endeavours, such as on how to avoid domination by special interests and ensure that public purpose is achieved. Indeed, perhaps the most important lessons are about how to cope with asymmetries in power, resources, and knowledge, particularly with respect to the most marginalised stakeholders, which in the case of VCMs would include not only local residents where offset projects are located, but also those groups who speak for long-term environmental interests and future generations.

The costs of such catalytic, multistakeholder governance are low. The central platform need not have many people – so long as they are the right people, with the requisite expertise and experience – and its operations, which consist primarily of curating, convening, and information-processing and -sharing, are relatively inexpensive.

Grow Asia: An Example of Whole-system Governance

One initiative in Southeast Asia successfully connected smallholder farmers with global agribusiness supply chains, setting environmental and social targets for its projects, and bringing in additional voices from entities as diverse as governments, NGOs and banks.[3] Crucially, it started with a governance design that drew on systemic thinking and focused on deep inclusion.

Hundreds of millions of smallholder farmers, cultivating less than two hectares or so, struggle to break out of poverty, often inadvertently damaging the environment and missing opportunities to raise their incomes and bolster food security by connecting with larger agricultural value chains. An initiative called Grow Asia, an outgrowth of the World Economic Forum's New Vision for Agriculture in partnership with the Association of Southeast Asian Nations (ASEAN) Secretariat, set out to reach many of Southeast Asia's many smallholder farmers with a multistakeholder partnership. It aimed to engage marginalised smallholder farmers in global value chains to three ends: alleviate the farmers' poverty (focusing on women and youth); decrease their negative environmental impacts as measured by GHG emissions as well as water and soil sustainability; and achieve greater food security by increasing the quantity and quality of their food production.

But unlike many market-driven agriculture development initiatives, Grow Asia started with key design principles based around deep inclusion and protection of vulnerable voices. Its Secretariat incorporated highly qualified people with expertise in development, sustainability, and business, who helped keep activities focused on the initiative's public purposes. Rather than the usual single governing body – in which the voices of the wealthy and powerful easily dominate – Grow Asia set up multiple stakeholder councils, including for business, NGOs, and one for the smallholder farmers themselves. Of the wide variety of organisations engaged with Grow Asia, no one actor or sector could dominate.

3

Complete Transparency

All information pertaining to the new VCM and its operations and procedures must be open and publicly available

On a December night in 1984, more than 40 tons of highly toxic gas leaked from a Union Carbide pesticide plant in Bhopal, India, killing at least 3,700 people and injuring another 558,000. It was the deadliest industrial disaster in history. The tragedy, and a smaller deadly gas leak in West Virginia the next year, prompted the US Congress to pass a law requiring all companies emitting certain levels of certain toxic chemicals to report those emissions to the EPA, which made the information publicly available.

Journalists and activists used the information to alert the public and direct advocacy campaigns. Using the then-new technology of the internet, the Environmental Defense Fund, an NGO, created an online scorecard with an interactive map that showed zip code-level information about which companies were emitting, what they were emitting, the quantities they were emitting, and the contact information for the company's CEO.

This information exposure led to public outcry and tighter regulations. Studies found that plants targeted by activist campaigns tended to reduce their toxic chemical releases.[4] Other countries began developing their own national toxic emissions inventories. Today, all OECD nations have adopted public inventory systems, and many developing countries, such as Indonesia, which publicly grades toxic emitting facilities by color, require some form of disclosure. Such 'regulation by revelation' – by which disclosures spark public pressure that compels firms to adjust their behaviour even in the absence of government regulation – now helps govern many domains, from restaurant hygiene to chemical weaponry.

Why complete transparency

Transparency means the degree to which information is available to outsiders that enables them to have an informed voice in decisions and/or to assess the decisions made by insiders. It is a foundational pillar of good governance. It is the right thing to do: the governed ought to have full information about the system in which they participate. And it is the pragmatic thing to do: evidence from fields as disparate as environmental protection, economic development, and even national security shows time and again that transparency makes a system more functional. By contrast, excessive secrecy leads to dysfunction, mistrust, and abuse.

Transparency strengthens the credibility of a system; people will trust what they can see with their own eyes. It strengthens the integrity of a system; people are less likely to act badly if they know others are watching. And it strengthens the efficiency of a system; when everything is open, problems are easier to spot and rectify, and lessons are easier to learn.

Further, as in the case of toxic chemical disclosure, transparency can spur oversight that leads to beneficial changes in behaviour. Transparency distributes the task of monitoring. If stakeholders have access to clear and credible information, they will often take actions that nudge a system toward better outcomes. To guarantee a public endeavour is meeting its goals, transparency is critical.

Complete transparency in the new voluntary carbon market

Transparency is essential for ensuring that the new VCM rapidly attracts liquidity and fulfills its public purpose. It allows for healthy scrutiny of projects and trading activity; it helps ensure the integrity and efficiency of the market; and it builds trust in the carbon offset and trading system. Transparency would avoid the problems of impenetrable contracts, opaque securities, and dark pools. Open access to transactional details (pricing and counterparties) will promote compliance with the Core Carbon Principles by suppliers, traders, and buyers, deterring bad faith actors. Open access to information on governance procedures shores up access and representation as well as trust and overall market legitimacy. And, in a lesson learned time and again, true transparency creates the knowledge needed for the adaptive governance of complex, constantly changing systems.

In VCMs, all information should be transparent unless there is a valid reason to conceal specific items or categories. Exclusions should only be allowed based on publicly known criteria decided through an inclusive, governance-board-led process. Such criteria might include exclusions that meaningfully – as assessed by the governance body - improve the market's ability to serve its public purpose. Some market participants will undoubtedly argue that such transparency will require them to reveal commercially sensitive information and so inhibit the market and reduce liquidity; however, the trust needed to build the integrity that underpins liquidity and scale is a far more compelling argument for full transparency. Only products that are fully transparent should be admitted. That entails that the market itself be designed in such a way that nothing is opaque and thus hidden from oversight.

Dimensions of transparency in carbon markets

All information related to trades should be public. This includes the registration and details of primary credit issuances, subsequent transactions, and secondary markets, such as derivatives. This also includes pricing information, such as share of proceeds distributions and prices along the transaction chain.

All information about projects and their developers should be public. This includes all the information gathered by verifying and certification bodies, including agreement by IPLCs, additionality test criteria, and impacts on nature. To ensure the integrity of the carbon credit supply, the IC-VCM and the public must be able to verify that a project complies with the core carbon principles.

All information about buyers should be public. The purchase of carbon offsets helps move the world to net zero, but it is only a bridge solution as enterprises find ways to stop burning fossil fuels. A public record of carbon credit purchasers will help promote accountability toward that goal and dissuade greenwashing.

Feasibility

A variety of technological tools renders much of this transparency broadly affordable. And employing well-established practices of proactive disclosure of public information will also help ensure that complete transparency prevails in the new VCM.

Tools: New technologies have overcome the technical hurdles to transparency and brought down costs. The IC-VCM should secure for itself the right to conduct spot inspections of projects and the standards that it endorses. But in many instances, it can rely on public observers around the world. Satellite-based geospatial imaging has advanced to the point where a person sitting at a desktop computer in Chicago can count individual trees in a Sumatra rainforest.

Blockchain and distributed ledger technology enable decentralised open-book accounting of carbon assets and their exchange.[5] Every market transaction – with associated price, counterparty, and term information – can be logged in a visible, immutable, auditable record. Though not yet fully operational, the Climate Warehouse, a blockchain-based open data repository created by the World Bank Climate Group, has the capability to make any registered carbon credit and its history publicly visible.

Proactive disclosures: These technologies alone are not enough to guarantee transparency, however. Much of the information involved in VCMs is held by private organisations and entities – and it is not necessarily in their private interest to release it. Thus, the rules of the new VCM must mandate that participants make proactive disclosures, as is standard under most freedom of information laws and right to information regulations around the world.

Through a consultative process, the IC-VCM could set the specific requirements for disclosure. Released information could then be uploaded onto public information hubs, centralised registries, and data repositories, such as the World Bank's Climate Warehouse, with the guarantee that the public would have unrestricted access. In addition, information should be made available in formats and language that are accessible to all stakeholders, not simply those with expertise and education in the subject matter.

Enabling environments: Even all these technologies and requirements for proactive disclosures will not, however, automatically ensure that stakeholders take the actions needed to keep the new VCM operating for the public good. The recipients of information need to have the capacity, power, and incentives to act on that information. Local farmers, for example, may be best situated to observe whether an ecosystem is being protected, but they may not be connected to project data systems nor have the ability or inclination to speak out if they see misbehaviour by powerful interests – especially if they are not receiving benefits from the project.

Experience with national-level right to information laws has shown that transparency is just the first step. Capacity, incentive alignment, and empowerment are all critical to effective governance. In the 1990s and early 2000s, many governments adopted freedom of information laws and right to information acts. Several of these, however, failed to lead to the desired governance improvements. Rather than comply with an information request or correct the problems a request revealed, unscrupulous officials would exact legal or physical attacks on those who made it.[6]

Hence the need for the third pillar of good governance for the new VCM: inclusive participation.

4

Inclusive Participation

All key market stakeholders — especially frontline community members — must have the opportunity to participate fully in the governance of the market, from project planning through impact assessment, and have meaningful and effective channels by which their grievances can be addressed

For more than a millennium, communities of rice farmers in Bali cooperated to irrigate their fields and plant their crop. Seasonal religious ceremonies dictated when each community could plant or when it would flood its fields to neutralise pests. Defying the tragedy of the commons prediction that only centralised management could save a shared resource from depletion, water sources never ran dry. In simulations, a computer could not find a more efficient rotation. The system was perfectly suited to its environment.

In the 1970s, the Indonesian central government in Jakarta forced Bali to adopt the technologies and innovations of the Green Revolution. Without consulting the Balinese farmers, the government delivered high-yield rice, chemical fertilisers, and instructions to plant higher quantities at higher frequency.

The result was a disaster. The higher-yield variety attracted more pests, which laid waste to crops. More frequent planting led to water shortages. Fertiliser ran off into the ocean, killing coral reefs. It was not until the 1980s that the government reversed course and allowed Bali to revive its traditional, community-managed system.

Why inclusive participation

All key stakeholders, especially those from local communities on the frontlines, need to have a voice in the governance of nature markets, both as a moral right and as an essential component of an efficient and liquid market. That requires that the carbon markets governance network systematically fosters the engagement of these communities in project design, collects stakeholders' authentic, representational views about the performance of the market, and evaluates those against the goals of its public purpose. A complex system is so dynamic, sprawling, and unpredictable that its governance cannot simply rely on a traditional regulatory approach, in which authorities make rules and take steps to enforce them. It must be supplemented with strategies that use and strengthen social capital.[7]

Many carbon credits traded in offset markets are generated by long-term (40-year+) projects in places where government capacity is limited. As in Balinese agriculture and other examples of community natural resource management, local knowledge and social capital can ensure the sustainable use and oversight of common pool resources.

And in many regions, only local communities can comprehensively oversee carbon offset projects. As sequestered carbon increases in value, the likelihood of conflict and illicit or unscrupulous practices will increase. If equipped with safe and meaningful ways to have their voices heard, local communities can serve as monitors of fraud, land-grabbing, and various forms of rent-taking. Local stakeholder involvement can also help balance the conflict of interest that validation and verification bodies face. Because these bodies survive on the fees paid by project managers, their incentive is to certify projects, not necessarily to guarantee that those projects are in the interest of a local ecosystem. The governance system must empower those communities and ensure they are not overpowered or ignored.

Inclusive participation is thus not just valuable for post-hoc monitoring and evaluation; it contributes to managing the real-time performance of the market – and ultimately its growth and success. Active feedback loops at all levels and phases of the value chain afford governance bodies a more complete view of the market's performance, and thus strengthen their ability to identify negative externalities, inefficiencies and quality issues, and instances where the market is failing to serve the public purpose of removing carbon from the atmosphere.

In addition to active feedback, the governance system must have grievance redress protocols that are safe and effective. Participants in any area of the market – whether supply-side, trading, or demand-side – should have the ability to lodge grievances without fear of retribution and with the assurance that the governance and managerial levels will treat complaints and disputes in a timely, meaningful fashion.

It is possible to have grievance procedures that actually work to solve problems and protect the rights of affected people. The Fair Food Program and the Coalition of Immokalee Workers banded together a decade ago to fight back again harassment and other workplace abuses suffered by farmworkers. Their independent, user-friendly reporting processes and peer-to-peer training have succeeded in dramatically reducing abuses, and have meaningfully held abusers to account.[8]

But the often-challenging experience with grievance processes in many arenas, from extractive industries to economic development projects, provides powerful demonstrations of how the lack of good mechanisms undermines the social license to operate. The global effort to redress business-related human rights abuses, for example, went to considerable lengths to build in such mechanisms to provide victims with remedies in places where judicial and other state-based protections proved unreliable. But a recent UN review of those non-State-based grievance mechanisms found that few "are fulfilling their envisaged role," with rights holders reporting "significant problems with identifying, accessing and using such mechanisms in practice."[9] If grievance procedures fall so far short in such a visible arena, with such a high degree of civil society and business engagement, it seems clear that carbon markets and nature markets more broadly need to be very careful in how grievance procedures are designed and implemented (see box 'A Grievance Mechanism that Works.')

But purpose-driven markets, even more than conventional businesses, must look beyond grievance mechanisms to ensure that crucial but marginalised stakeholders have more effective mechanisms to ensure their rights and their views are respected.

Stakeholders who are materially affected in the market should be authentically represented in the IC-VCM. The body has reserved three of its 22 seats for representatives from Indigenous Peoples. That's a good start. Involving such stakeholders will make the governance more adaptive and effective. Numerous studies from around the world have shown that public service delivery improves when civic input is incorporated into the design and management of a programme.[10] Government policies that include citizens in some stage of their inception are more likely to be implemented quickly and effectively. Participation cultivates a sense of ownership and trust, such that stakeholders will be more committed to the system and its benefits over the long-term.

Moreover, there is compelling evidence that in a complex system, a team comprised of diverse members is better at problem-solving, innovating, and making accurate predictions.[11] Diversity does not only mean ethnic or racial differences, but also cognitive diversity, which is, among other things, a function of educational and experiential background. Carbon markets are complex systems involving a panoply of institutions, fields, and locales. The broader the governance system's knowledge base, the better it will be at anticipating, understanding, and responding to unexpected changes and developments in the market.

At the same time, the failure to engage all key stakeholders in a meaningful way can result in reputational and performance damage. In extractive industries, for example, many companies have suffered material losses, legal difficulties, and severe investor blowback as a result of their failure to consult with local communities in the areas where they operate.

Inclusive participation in the new voluntary carbon market

Inclusive participation for the governance of the new VCM should have at least three components:

1 **Channels for all key stakeholders to provide input and feedback.** On the supply side, this means project managers, verifiers, and local communities affected by a project should have meaningful voice in the governance system at every phase of the project lifecycle, from development through impact assessment. Trading participants should have the ability to report on the performance of the exchange infrastructure and process. And on the demand side, purchasers should be able to comment on the buying experience, and the quality and integrity of products. The governance system should be proactive in gathering this feedback and use technologies and methods with proven records of success.

2 **Safe and effective grievance redress and dispute resolution mechanisms.** A system for grievance redress needs to exist at each level of the new VCM. That means on the supply side, local stakeholders can access safe grievance procedures that channel directly to community representatives and other members of the IC-VCM. In trading, the exchanges, over-the-counter (OTC) brokers, and other intermediaries must be able to report non-compliant or illegal practices and trades. And on the demand side, buyers can have purchase or product disputes settled. The stakeholders at each of these levels should participate in the design of the grievance procedures to ensure their feasibility and acceptability.

3 **A governance system that prioritises and uses its authority to ensure local communities are directly and materially represented in the system.** The mere existence of mechanisms for local communities to express their voice or air their grievances does not in itself overcome the power asymmetry between an indigenous community and a mining company, for example. In a meta-analysis of the research on the impact of social accountability measures in general, one political scientist found that "bottom-up monitoring" and community oversight are likely to be "either ignored or squelched" unless those community members have the backing of powerful allies or "counterparts to build countervailing power."[12]

The IC-VCM should use what authorities, tools, and structures it has to support the least powerful stakeholders in the value chain, especially local communities and frontline project stewards. That could take the form of an independent stakeholder forum – a safe space for issues and grievances to be aired, that would have a direct channel to the IC-VCM and entail an obligation for the board to respond. But whatever structure is used must have real role and voice. As that political scientist wrote, "Voice needs teeth to have bite."

A Grievance Mechanism that Works

The IC-VCM ought to make developing a safe and effective grievance redress system a priority. That system must go beyond appeals to enable the hearing and resolving of complaints, especially from local communities.

Whatever form that system takes, it should be: [1]

- Legitimate (perceived as independent from the parties in the grievance);
- Accessible (especially for those facing reprisals or cost, language, literacy barriers);
- Predictable (clear procedures and timelines);
- Fair (perceived as fair in terms of access to information and participation);
- Transparent (in procedures and outcomes);
- Capable (has the necessary technical, financial, and human resources);
- Compatible (outcomes are consistent with the purpose of the market); and
- Adaptive (constantly identifies lessons to improve the system and prevent future harm).

Feasibility

Various technologies and methods make community engagement and the systematic collection and processing of stakeholder input both feasible and affordable at scale. A number of private groups, both for-profit and non-profit, have developed apps, phone-bank systems, and other techniques to monitor social impacts and engage local communities around a wide range of projects.

For instance, the Rainforest Alliance has developed a strong community engagement protocol as part of its agriculture certification programme. To ensure its sustainable agriculture standard is credible and that its implementation processes are effective and appropriate, the Rainforest Alliance interacts in a variety of ways – one-on-one meetings, workshops, webinars, and others – to gather feedback and collaborate with stakeholders at all levels of the value chain, including producers, traders, retailers, governments, NGOs, academia, and others.[13]

There are also tools that can help. True Footprint, a Cambridge-based tech company, equips local volunteers with a smartphone app that enables them to monitor development projects in their community. The data they generate are shared within the community and with central authorities, arming both groups to demand contractors carry out a project with fidelity. The app has been used to monitor 3,000 projects worth in total more than $1 billion that affect more than 5 million people. It also provides a mechanism to engage local communities in the development of projects, surveying them on their concerns and the issues that are important to them before the project design phase. In addition, companies now use True Footprint's app to empower locals to monitor the sustainability of their supply chains.

Similar digital crowdsourcing tools effectively, and at low cost, enable stakeholders to provide oversight that furthers the public interest. 'I Paid a Bribe,' an app first developed in India and later adopted by nearly a dozen other countries, enables users to anonymously report extortion by government officials. In Ukraine, a watchdog community of civil society organisations, public purchasers, and more than 1,000 volunteers formed on a public procurement monitoring portal created with minimal funding from Transparency International.[14] The platform enables members of this community to analyse procurement data and spot high-risk tenders, prompting them to submit hundreds of grievances monthly to public authorities.

Other platforms allow governance bodies to 'pull' feedback from market stakeholders. The company 60 Decibels conducts large-scale phone-based surveys that rapidly benchmark the performance of a project at low cost. Coupled with digital tools that aggregate and apply statistical analysis to such data, surveys are a powerful tool for gathering stakeholder voices.

5

Conclusion

A governance model built around these principles is crucial for the success of the new voluntary carbon market. It also serves as a template for the governance of future nature markets. These principles will prove especially applicable to potential biodiversity offset markets, for instance, which will deal with similar nature-based projects and thus require the same kind of intensive oversight and stakeholder engagement as those that form the basis of carbon markets.

Whatever configurations the nature markets of the future adopt, we can be assured that, like carbon markets, they will be complex and face the foundational imperative to serve the public interest. And that means that governing them successfully – that is, ensuring that they become liquid and deliver environmental protection – will depend on the interacting work of many actors. It will depend on how well the governance system gathers, distributes, and acts upon quality information. And it will depend on how well that system is able to demonstrate its independence and utility and maintain a systemic vantage point. This is a tall order, and the territory is largely uncharted.

Additional design work for nature markets

To help fill in the map, so to speak, we recommend additional governance design work for nature markets, to include:

- Performing governance design analysis and recommendations tailored to other potential nature markets, such as biodiversity offset markets.
- A broader analysis that describes humanity's past approaches of governing nature and that points to the governance models needed to ensure the financial value of nature.
- Developing a 'bank' of governance tools and solutions that could be drawn upon for the nature markets of the future.
- Perhaps in partnership with the IC-VCM, further defining and reviewing the specifications of carbon market stakeholder engagement and transparency mechanisms, such as a grievance redress system, feedback channels, and oversight protocols.

This paper and the recommendations within it are meant as a place to start. They do not guarantee a perfect system. Even the most forward-thinking, elegantly designed governance will fail to anticipate everything. Issues will arise. Unforeseen challenges will have to be ironed out as they emerge. A period of learning and trial and error will have to occur before all the pieces in the system function together and smoothly. Iteration will be needed.

All the more reason that we need open, transparent, adaptive governance systems that can deal with unpredictable events and behaviours. Only with this kind of dynamic governance can nature markets function optimally and fulfil a public purpose at a scale that can make a meaningful difference.

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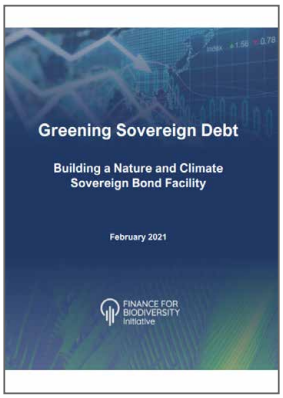

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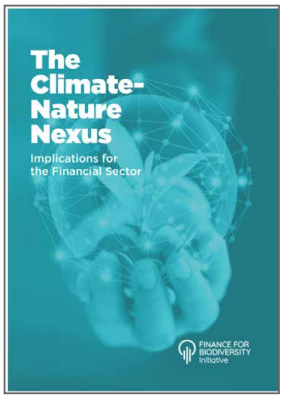

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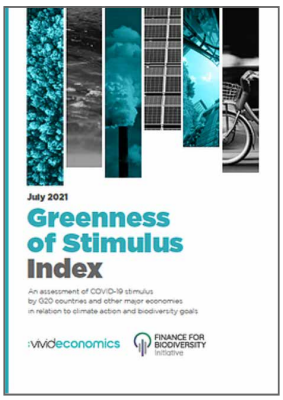

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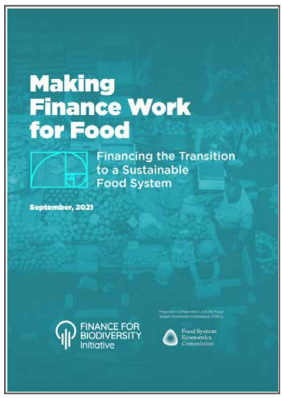

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