



# High Integrity, High Impact:

## The World Bank Engagement Roadmap for Carbon Markets

### Executive Summary

Carbon markets could be a game changer in advancing climate action. But they have to be trustworthy, transparent, result in real climate mitigation and bring tangible benefits, especially for developing countries, if they are to make a real difference. Like any effective market, incentives need to be well-aligned, both buyers and sellers need confidence in the quality of the product and the price it will get, and that the transactions themselves are sound and sustainable.

If done right, carbon markets can serve as a crucial mechanism for financing decarbonization efforts and significantly enhance financial flows to developing countries. By assigning a financial value to carbon reduction and removal, carbon markets encourage private sector engagement in projects that might otherwise struggle to secure funding, especially without a clear price signal.

The World Bank Group (the Bank) has been supporting countries by providing technical assistance and financing to enable countries to generate, and now to sell, high integrity carbon credits in the forests and other sectors, and bring benefits to people and communities see a snapshot of our work in box 1. This has been an effort over twenty years in the making—building systems from the bottom up to get these markets working. In parallel, the Bank has been building the institutional structures and capacity, at the country and global levels, to help bring greater transparency and reliability to the global market.




Through this support countries have generated unimpeachable credits—namely, of high quality and high integrity—and developed country systems to share benefits and fairly compensate people and communities. In just 15 FCPF countries—Chile, Costa Rica, Cote

#### Box 1: Forest Carbon Partnership Facility, At-A-Glance:

- » **15** countries across Asia, Africa, and Latin America
- » Up to **90%** of the results-based payments go to Indigenous Peoples and Local Communities
- » **126 million** credits can be available for sale, of which 24 million in 2024
- » **270 million** credits by 2028, of which 95 million already generated

d'Ivoire, Democratic Republic of Congo, Dominican Republic, Fiji, Ghana, Guatemala, Indonesia, Lao PDR, Madagascar, Mozambique, Nepal, Republic of Congo, and Viet Nam—these efforts are expected to produce over 270 million high integrity carbon credits over the next five years, which could earn between \$1.3 billion and \$3 billion for the countries and communities.

To unlock the potential of carbon markets, the global community needs to do more. The Bank has ambitious plans, internally, and with others. Our Engagement Roadmap for Carbon Markets is designed around three key results:

-  **First, supporting countries to generate a robust supply of high integrity credits to unlock financing from carbon markets,** building on the promising results and achievements across 15 countries to conserve and sustainably manage forests. These countries have been able to generate credits beyond contracted volumes, allowing them the option to sell those high integrity carbon credits and earn income from the international market.
-  **Second, better leveraging the Bank's operations by designing and implementing large scale programs that include emission reduction results-based payment components to channel climate finance.** Building on the successful forestry model, the Bank will expand efforts by supporting programs that focus on the energy transition, on mangrove restoration, soil organic carbon, regenerative agriculture, among others. These efforts are enhanced by Bank programs that build capacity in countries to set up the institutions, market infrastructure and regulations to generate and sell high quality carbon credits.
-  **Third, ramping up efforts to shape a sound, well-functioning and trusted global carbon market.** Partnering with stakeholders, the Bank is ramping up its efforts to unlock the most critical bottlenecks, including efforts to bring clarity to the markets that can build trust. But building this market is not an end to itself: climate, people and communities will be front and center in our approach, ensuring that they benefit from efforts to build a livable planet.

## Carbon Markets as Game Changers

**Carbon markets could be a game changer in advancing climate action.** Countries and communities blessed with natural resources, such as forests, can generate millions, if not billions of dollars from new sources of revenue from protecting, preserving, restoring and regenerating them.

**Carbon markets are primed for growth.** This is because of positive developments during COP26 around Article 6 of the Paris Agreement, whereby carbon credits can be traded to meet countries' Nationally Determined Contributions, as well as growth in the self-regulated Voluntary Carbon Markets, driven by demand from companies to meet their voluntary climate commitments. Domestic compliance market instruments, namely Emission Trading Systems and carbon taxes, have also been growing in size and scope. While Voluntary Carbon Markets play a pivotal role in directing immediate climate finance, compliance and Article 6 markets are key to enhancing long-term goals. However, many countries still lack the institutional capacity and infrastructure to participate in compliance markets and Article 6 markets, and it will take time to fully establish these systems. This is why the supply of carbon assets under Article 6, namely, Internationally Transferred Mitigation Outcomes has not yet emerged and the Internationally Transferred Mitigation Outcomes market has yet to be established. In the interim, well-designed Voluntary Carbon Markets can be instrumental in facilitating payments for emission reductions, offering a source of financing for climate actions. They also help build capacity to support compliance and Article 6 implementation. However, Voluntary Carbon Markets require strong governance, oversight, transparency and integrity to grow further, and unlock the much-needed climate finance today.

**As both markets continue to evolve, stronger Voluntary Carbon Markets today can set the stage for robust compliance markets tomorrow.** Trustworthy Voluntary Carbon Markets will increasingly provide companies with the opportunity to use them to meet their voluntary climate commitments. These markets serve as a bridge to further decarbonization as companies make the harder transitions to low-carbon energy sources, greening supply chains and transportation fleets and investing in energy efficiency. Voluntary Carbon Markets also offer a space for innovation and piloting of approaches that can inform future program design and implementation in compliance markets. Developing an efficient and transparent global architecture for Voluntary Carbon Markets and piloting Internationally Transferred Mitigation Outcomes transactions can lay a strong foundation for robust international and national carbon markets.

## What is Holding Carbon Markets Back?

In one word: trust. Sellers need to be assured their efforts will be fairly rewarded, buyers need to feel confident in the regulatory framework, and environmental integrity of the credits they purchase, and overall, there needs to be confidence that the global carbon market architecture is well-functioning and able to yield mitigation results at scale. The good news is that substantial work has been done to find solutions for each of these concerns, and possible landing zones exist (see Figure 1). But much more needs to happen from players across the carbon markets ecosystem to deliver trusted and scalable ecosystems and infrastructure to support transparent carbon markets, enhance climate ambition and channel climate finance.

**Figure 1:** A Call to Action for Trusted, Transparent Carbon Markets



## Clarify rules of the game by:

- ▶ **Strengthening the regulatory regime:** Clarity about the regulatory regime governing markets is needed to remove market uncertainty. Addressing policy and regulatory risks faced by private investors will be needed, as governments start defining and regulating their carbon assets. Risks that need to be mitigated could include restrictions on export of carbon credits, revocation over carbon rights, and new taxes on carbon project development.
- ▶ **Boosting financial integrity:** Clarity about the legal nature of carbon credits, the governance of trading market architecture, price transparency, and rules to prevent fraudulent market activity, among others, is key to building trust.

## The Bank is Stepping Up

The Bank has ambitious plans to partner with others to unlock the potential of high integrity carbon markets, building on over 20 years of engaging in this space.

### Box 2: The Bank's History with Carbon Markets

Date	Milestone
1999	Created the world's <a href="#">first carbon fund</a> (Prototype Carbon Fund)
2008	Launched the <a href="#">Forest Carbon Partnership Facility</a> and pioneered jurisdictional approaches through REDD+ programs in 47 countries. This is followed by the creation of several other multi-donor results-based climate and carbon funds (e.g. <a href="#">BioCarbon Fund Initiative for Sustainable Forest Landscapes</a> , <a href="#">Carbon Initiative for Development</a> , <a href="#">Transformative Carbon Asset Facility</a> , <a href="#">Carbon Partnership Facility</a> ).
2015	Partnership for Market Readiness program launched to support countries with their carbon pricing and carbon crediting policies. Partnership for Market Readiness evolves to <a href="#">Partnership for Market Implementation</a> in 2021, supporting 30 countries to date. The International Finance Corporation issued \$152 million Forest Bond that supports private sector forest conservation project in 2016.
2018	Initiated the <a href="#">Climate Warehouse</a> which supports global carbon market infrastructure development by leveraging low-cost open-source technology to create an end-to-end digital ecosystem for a globally connected carbon market.
2020	The <a href="#">Climate Market Club</a> is launched to develop approaches to operationalize carbon markets. Today it convenes it convenes 19 market participants, of which 14 are governments.
2022	Launch of <a href="#">SCALE—Scaling Climate Action by Lowering Emissions</a> to provide concessional finance and grant payments for verified emission reduction credits and building capacity to mobilize additional private sector revenue through carbon markets. An associated fund, <a href="#">ENABLE—Enabling Access to Benefits while Lowering Emissions</a> enhances gender equality and social inclusion.

**2023** Developed innovative carbon-link outcome bonds that mobilizes private sector investments for project implementation and provides investors a return linked to the issuance of carbon credits.

The Bank also signs a first-of-a-kind climate policy crediting program to support Uzbekistan's clean energy transition, energy efficiency and energy subsidy reforms: supporting [policy reforms through payments for emissions reductions](#). This program under the Transformative Carbon Asset Facility constitutes the world's first large-scale Internationally Transferred Mitigation Outcomes transaction.

Our efforts have yielded significant results (see Box 3). And they have been grounded in global partnerships. We work with sovereigns interested in purchasing credits, as well as emerging markets and developing economies who want to sell credits, private sector entities, Multilateral Development Banks and United Nations agencies. The role, voice and participation of Indigenous Peoples and local communities are central to our approach—ensuring that their efforts are fairly rewarded.

**Box 3: Results and Impact**

<b>Mobilization</b>	<ul style="list-style-type: none"> <li>» \$4.8 billion in carbon funds, with over \$1.7 billion disbursed towards emission reductions since 1999</li> <li>» Over 220m tons of GHG emissions reduced</li> </ul>
<b>Technical assistance</b>	<ul style="list-style-type: none"> <li>» Building capacity in more than 60 countries, with both project-level support to generate credits, and country-level support to set up infrastructure and institutions (registries, national measuring, reporting and verification systems, regulatory frameworks)</li> </ul>
<b>Innovations</b>	<ul style="list-style-type: none"> <li>» Developing jurisdictional methodologies in the forestry sector to minimize leakage</li> <li>» Financial product innovation—carbon-linked instruments</li> <li>» Open-source technologies to create a connected global carbon market via <a href="#">Climate Action Data Trust</a></li> </ul>
<b>Knowledge and Partnerships</b>	<ul style="list-style-type: none"> <li>» The <a href="#">Annual State and Trends of Carbon Pricing</a> report, a flagship analytical piece about carbon pricing and crediting activity</li> <li>» Annual <a href="#">Innovate4Climate</a> conference and Partnership for Market Implementation Global Knowledge Forum to convene stakeholders to find solutions to the most pressing issues in carbon markets</li> <li>» The <a href="#">Digital4Climate</a> public-private forum to discuss digital technologies for carbon markets</li> <li>» The <a href="#">Climate Market Club</a> which brings developed and developing countries together to address compliance markets bottlenecks</li> </ul>

## The Bank is Scaling Its Ambition on Three Fronts:

### 1 Supporting countries to unlock financing from carbon markets

Launched in 2008, the Forest Carbon Partnership Facility has supported 47 countries to develop large-scale programs to reduce emissions from deforestation and forest degradation, conserve and enhance forest carbon stocks, and sustainably manage forests (activities are commonly referred to as REDD+). Forest Carbon Partnership Facility programs are implemented according

to a robust methodological framework that assures high environmental and social integrity of credits. We work with third-party verifiers to ensure that emission reduction credits are:

- **Additional**, namely that the emissions would not otherwise have been reduced;
- **Permanent**, with mitigation measures in place to prevent the emission reduction being reversed
- **Measurable**, using clear and acceptable standards;
- **Not double counted**, by the buyer and seller; and
- **Do not lock in activities** or investments that are incompatible with a country's net-zero targets.

## Proof of concept

Countries supported by the Forest Carbon Partnership Facility have made significant progress over the last fifteen years, moving from readiness to implementation. This final stage now requires countries to monitor and verify results, while also distributing revenue through a benefit sharing plan that stipulates the use of payments received, advances access and decision-making for Indigenous communities over forest management and the use of revenues (see Box 4). Today, 15 countries—**Chile, Costa Rica, Cote d'Ivoire, Democratic Republic of Congo, Dominican Republic, Fiji, Ghana, Guatemala, Indonesia, Lao PDR, Madagascar, Mozambique, Nepal, Republic of Congo, and Viet Nam**—have signed emission reductions payment agreements with the Bank and have reported 95 million high-integrity carbon credits. Five of these countries—**Costa Rica, Ghana, Madagascar, Mozambique, and Viet Nam**—have completed at least one cycle of measurement, reporting and third-party verification and received payment, resulting in \$90 million of results-based payments that are being shared with communities. The remaining 10 country programs are currently undergoing third-party verification. The Bank will continue to support countries, particularly on measurement, reporting and verification matters over the next 3-5 years.

### Box 4: Involving Local Communities to Drive Success



*"Many times, we believe that these issues are only for men or only for a small group, and that is not the case. This issue is for everyone, because we are all affected by climate change, we are all affected by environmental pollution. This type of thing affects not only one person, but the entire population."*

—Florita Martinez Jimenez, from the Douro Community, Cabe Carneiro Bori Indigenous Territory

*"I think this is a very important moment for indigenous territories and local communities to demonstrate that they can be actors, can have resources, invest them in their communities, and generate development."*

—Maria Elena Herrera Ugalde, FONAIFO, the Costa Rican REDD+ organization

## What comes next?

Beyond the credits that the Forest Carbon Partnership Facility has contracted to purchase, these 15 programs are expected to generate up to 126 million credits by 2028, with approximately 24 million available as early as 2024. Countries can now decide how to use these credits—either count them against their own Nationally Determined Contributions or sell them in carbon markets, via:

- **Direct sales** which allow for the highest degree of customization of transaction terms and translate to greater flexibility and privacy. Some countries like Ghana and Costa Rica have already entered into agreements with private buyers.

- **Auctions** which allow countries to make a specified amount of Forest Carbon Partnership Facility credits available to auction, which enables credits to be sold efficiently and competitively, establishing a fair market price for both buyers and sellers. Viet Nam is the first country in a position to choose to auction a portion of its Forest Carbon Partnership Facility credits.
- **Exchanges** which list the credits for purchase on a platform: sellers list a minimum asking price or choose whether to sell to a bid price. The transaction is made via international carbon credit exchanges, where contract terms become standardized, and information can be shared transparently and equally with all market participants.

For the remaining Forest Carbon Partnership Facility countries, we will set up a technical working group for forests and land to support additional Forest Carbon Partnership Facility countries to generate emission reduction credits.

Lastly, we will pilot new financial products, such as Multilateral Investment Guarantee Agency's de-risking instruments, to mitigate regulatory and policy risks faced by private buyers of the credits.

## **2 Design and implement large-scale emission reduction programs in the Bank's portfolio**

**Beyond our forests' programs, the Bank is now working to systematically design, implement and mobilize carbon finance across our portfolio, by supporting projects to generate and sell high integrity carbon credits.**

### **What comes next?**

We will embed results-based climate and carbon finance in key operations that generate significant emission reductions, such as low-carbon infrastructure solutions including renewable energy, energy access; and natural climate solutions including mangrove restoration and low carbon rice, thereby mobilizing additional finance for projects, including from the private sector. Work is already underway in such projects in Eastern and Southern Africa, Europe and Central Asia and East Asia and the Pacific. We will also leverage our existing carbon funds to provide technical assistance and project preparation funding to build country capacity and design projects to generate high-integrity high-quality credits. Specifically, we are:

- Instituting policies, procedures and financing modalities that will support the generation of monetizable carbon credits in World Bank-supported programs.
- Continuing to leverage our existing carbon funds to provide the technical assistance and project preparation needed to build country capacity for generating high-integrity and high-quality credits and will seek additional contributions as needed in the context of expanded ambition.
- Creating financial products such as carbon-linked bonds, which mobilize ex-ante from the private sector flows against future delivery of carbon credits.
- Designing guarantee instruments for private sector buyers to hedge certain carbon market risks associated with the regulatory and policy uncertainties of the host countries, such as Multilateral Investment Guarantee Agency products that would provide private investors with political risk guarantees to cover non-commercial risks related to carbon credits.

## 3 Deepen partnerships to unlock critical bottlenecks for carbon markets expansion

### What comes next?

We will further partner with actors in the carbon markets ecosystem:

- **By working with our client countries through country programs, the Partnership for Market Implementation, and other carbon funds,** we will build capacity to set up essential carbon markets infrastructure, such as national registries and national measuring, reporting and verification systems, that connect to Paris Agreement reporting requirements, as well as carbon markets strategies, frameworks and regulations.
- **By working with principles-setters,** we will accelerate operationalization of integrity principles that give clarity to the market. These include the “core carbon principles” as defined by the Integrity Council for Voluntary Carbon Markets and claims corporates can make when they buy carbon credits under the Voluntary Carbon Markets Initiative.
- **By working with independent standards** such as Verra, Gold Standard, American Carbon Registry, and others, we will boost market transparency by connecting data on carbon credits that currently reside in disparate registries through the Climate Action Data Trust, as part of the Climate Warehouse initiative.
- **By working with validation and verification bodies,** we will support the standardization of the services provided by these bodies and develop standard protocols to support the use of digital measuring, reporting and verification, including smart meters, sensors, IoT, and the latest remote sensing technologies and Artificial Intelligence.
- **By working with independent carbon credit rating agencies,** we will improve the consistency of the carbon credit rating framework.
- **By working with entities including the United Nations Framework Convention on Climate Change,** the International Organization of Securities Commissions, International Institute for the Unification of Private Law and others, we will help establish frameworks that enhance the financial integrity of carbon markets, such as the legal nature of carbon credits, the governance and reliability of transaction registries; and the efficiency and governance of the carbon trading market architecture.

**We will partner with others.** We will continue to strengthen collaboration with our donor community, that have historically supported our carbon markets efforts, and our client countries, who are looking to tap into carbon markets to generate climate finance flows and help in achieving climate ambitions. We invite others: philanthropic foundations, the private sector, countries and civil society to join us in this journey.

## Conclusion

High-integrity carbon markets can be a win-win for people and the planet, potentially generating millions, if not billions, for countries on the pathway to low carbon development. While there are challenges, the potential of carbon markets needs to be tapped and fully utilized.



Our goal is ambitious: starting with catalyzing high integrity, high impact supply from our own portfolio, and building the capacity of client countries to get prepared and utilize the opportunities that carbon markets bring, we are working with the carbon markets ecosystem to unlock bottlenecks that have hampered growth. Our success depends on us partnering with others, and you with us. And our goal is to scale trustworthy, high impact, and high integrity carbon markets that benefit developing countries, increase climate ambition, and help channel much needed climate finance today.