



**University of  
Zurich**<sup>UZH</sup>

**Zurich Open Repository and  
Archive**

University of Zurich  
University Library  
Strickhofstrasse 39  
CH-8057 Zurich  
[www.zora.uzh.ch](http://www.zora.uzh.ch)

---

Year: 2022

---

## **Brokering Private Action for Sustainable Development: The Role of the World Bank**

Michaelowa, Axel ; Michaelowa, Katharina ; Andonova, Liliana B

**Abstract:** Turning to partnerships in climate change governance, Katharina Michaelowa, Axel Michaelowa and Liliana B. Andonova (Chapter 4) examine the brokerage role of the World Bank in mobilizing public and private actors to contribute to the development of transnational carbon markets through the shaping and piloting of methodologies, financing, and capacity. In particular, the chapter assesses the Bank's pioneering role in international carbon markets, which dates back to the establishment of the Prototype Carbon Fund (PCF) in 2000. The authors evaluate such a role against the conditions for effectiveness described in the volume's analytical framework, and then link it to the carbon markets' actual achievement of different dimensions of effectiveness. They demonstrate that the World Bank's involvement has led to a significant commitment of resources and facilitated the creation of sophisticated contracts and methodologies for international carbon markets, even though the Bank has found it increasingly difficult to mobilize private sector financing in recent years. In addition, they highlight that while the World Bank-brokered partnerships have often been effective in creating value for the partners, this has come at the expense of real additionality in carbon emission reductions, and thus hindered the partnerships' overall contribution to climate change mitigation.

DOI: <https://doi.org/10.4324/9781003148371-7>

Posted at the Zurich Open Repository and Archive, University of Zurich

ZORA URL: <https://doi.org/10.5167/uzh-219140>

Book Section

Published Version



The following work is licensed under a Creative Commons: Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) License.

Originally published at:

Michaelowa, Axel; Michaelowa, Katharina; Andonova, Liliana B (2022). Brokering Private Action for Sustainable Development: The Role of the World Bank. In: Andonova, Liliana B; Faul, Moira V; Piselli, Dario. Partnerships for Sustainability in Contemporary Global Governance : Pathways to Effectiveness. London: Routledge, 104-119.

DOI: <https://doi.org/10.4324/9781003148371-7>

# 4 Brokering Private Action for Sustainable Development

## The Role of the World Bank

*Axel Michaelowa, Katharina Michaelowa and Liliana B. Andonova*

### Introduction

Broker organizations (or brokers for short) are identified as important facilitators of multistakeholder partnerships, which could furthermore support more effective collaboration between different sectors (Stadtler and Probst 2012; Stadtler and Karakulak 2020). In this sense, they provide a range of facilitative, informational and mediational functions. Brokers can provide platforms to connect different actors and provide a basis for communication and agreement between organizations with diverse cultures and priorities. Beyond simply providing platforms, they can facilitate bridging across organizations by fostering common understanding of the objectives of the partnerships in which they are engaged, and they can support their interaction with expertise and by cultivating trust among partners.

This chapter examines the role of the World Bank as a broker organization between, on the one hand, public institutions at the international and domestic level, and, on the other hand, private actors in the development of markets for international greenhouse gas emission credits. This interaction of the World Bank with other public institutions and private actors has involved the establishment of partnerships with different degrees of formalization and participation of the public and non-state sectors. Such initiatives include the Prototype Carbon Fund (PCF) as a pioneering public-private partnership for generating international emission credits initiated by the World Bank. They also include the Forest Carbon Partnership Facility (FCPF) where states are the primary participating constituencies but private and advocacy actors are also involved as observers on the governing board and as co-implementing entities. This chapter thus uses the term partnership broadly to refer to a range of different agreements and interactions between public institutions and private actors in the development, implementation and transactions of emission credits. It focuses the analysis first on the brokering role of the World Bank and how this role shaped the degree to which collaboration among relevant actors was successful in developing international markets for carbon offsets and emission credits as a mechanism for addressing climate change. Furthermore, it examines how World Bank-brokered initiatives have influenced broader global institutional arrangements for international carbon markets outside

these partnerships. These arrangements include generating and trading credits, as well as financing underlying activities.

Several studies in international relations have already highlighted the role of international organizations, and the World Bank specifically, either as entrepreneurs of new governance modalities such as partnerships (Andonova 2017) and trust funds (Reinsberg, Michaelowa and Knack 2017; Reinsberg et al. 2020), or as orchestrators of initiatives that engage a broad range of actors other than states to advance a set of functions and governance objectives (Abbott et al. 2015; Hale and Roger 2014). As we will discuss, both of these roles are closely related and sometimes indistinguishable from the World Bank's role as a broker. The chapter builds on an earlier article by some of the authors (Michaelowa et al. 2021) on the role of the World Bank in launching and facilitating partnerships for international carbon market mechanisms. It now turns the focus specifically on the extent to which the conditions for the different pathways to effectiveness, highlighted in the conceptual chapter of this book (propositions 1–4), were affected by the World Bank's activities. In light of this analysis, we will also discuss the extent to which meeting these conditions may have actually put the partnerships onto the pathways to effectiveness elaborated in the analytical framework (Chapter 1) and resulted in the adoption of meaningful activities by these partnerships. Ultimately, this will shed some light on the implications of these initiatives for addressing the climate change problem.

### **The World Bank as a Broker: Conceptual Considerations**

The concept of a broker is closely related to the concept of an orchestrator. Abbott and Snidal (2010, p. 317) define orchestration as organizational activity that

entails mobilizing and working with private actors and institutions to achieve regulatory goals, for example, by catalyzing voluntary and collaborative programs; convening and facilitating private collaborations; persuading and inducing firms and industries to self-regulate; building private capacities; negotiating regulatory targets with firms; and providing incentives for attaining those targets.

Orchestration thus encompasses a broad range of initiatives that could be enabled in several ways through the platforms of international organizations.

With the concept of the broker, we wish to capture a more specific facilitation and bridging role between the actors or organizations working together that can lead, for instance, to contractual agreements and new institutions (such as trust funds). Furthermore, a broker can go some way beyond the activities of simple orchestration by getting heavily involved in the development of new tools and procedures as opposed to just facilitating the joint activities of others. When coordinating between different actors is simultaneously used to move the policy or institutional agenda, the concept of brokers also overlaps with the concept of political entrepreneurs. According to Christopoulos and Ingold (2011; 2015), both

are important strategic actors in public policy, and both are viewed as “exceptional agents” endowed with expertise and strategic position. Yet, Christopoulos and Ingold (2011) also highlight some key differences in agency and functions between entrepreneurs and brokers. In particular, policy entrepreneurs use their informational advantage to act as strategic and often opportunistic actors and to actively seek influence (see also Andonova 2017; Boasson and Huitema 2017; Mintrom 1997). Mintrom and Norman (2009, p.651) identify essential dynamics of policy entrepreneurship, such as “displaying social acuity, building teams, defining problems, and leading by example.” Andonova (2017) shows that these characteristics also apply to the World Bank. She argues that international organizations, such as the World Bank and their leadership, have acted at opportune political moments as entrepreneurs of public-private partnerships and new mechanisms of governance within the multilateral system, in an effort to draw attention to a set of problems, leverage political and non-state resources and coalitions and devise new instruments to attempt to address them.

Here, however, we are primarily interested in the World Bank’s role as a broker. Brokers serve rather as “unique interlocutors” that take center stage in inter-organizational interactions and provide a set of trust-building and bridging functions (Provan and Kenis 2008; Stadtler and Probst 2012). Rather than mobilizing latent interests for a common social movement or lobbying effort, they are mediators of conflicting beliefs who engage diverse sets of actors within a group and provide the relevant tools and mechanisms to move forward. Importantly, the literature also highlights that these positions can switch, as entrepreneurs become brokers, once a particular partnership initiative or policy space is created, or leave such roles ambiguous.

The importance of broker organizations has been highlighted in the context of policy networks (Christopoulos and Ingold 2011; 2015) with respect to the network coordination of multi-organizational governance (Provan and Kenis 2008) and, more recently, for transnational governance initiatives such as cross-sector partnerships (Stadtler and Probst 2012; Stadtler and Karakulak 2020). Provan and Kenis (2008) depict a continuum of networked governance which can be brokered to a very limited degree or not at all or, conversely, highly brokered either by a participant that has taken on the functions of a broker or an external organization providing highly centralized facilitative functions. These functions range from providing a platform, communication, information or expertise, to establishing greater trust and accountability among participants or developing viable tools for the implementation of planned activities. Provan and Kenis (2008) further stipulate that the greater the number of the participants, the lower the density of a priori trust; while the more diffuse the consensus among participants, the more important a broker organization is likely to be for the effectiveness of network-based governance. The literature further suggests that resources, legitimacy and a certain expertise are among the key assets for brokers to provide “network-level competencies” and facilitative functions (Provan and Kenis 2008, p.10). Stadtler and Probst (2012) elaborate similar functions of broker organizations – as conveners, mediators, and learning catalysts, noting that the specific roles along these

dimensions may vary at the different stages of the development and implementation of partnerships. Overall, the literature suggests that effective brokerage could support the effectiveness of network-based governance, such as partnerships, involving public-private interactions.

In this chapter we seek to examine, more specifically, to what extent the brokering role of the World Bank has had a direct effect on four of the five pathways elaborated in the theoretical framework, namely, goal attainment, value creation for partners, collaboration inside the partnerships, impact on institutions (notably carbon markets) outside the partnerships and an indirect effect on affected populations (see Chapter 1). The chapter takes an inter-temporal perspective to examine the impact of World Bank brokerage on the structuring and effectiveness of carbon offset funds and their broader influence on carbon markets.

## **Four Periods of World Bank Involvement in International Carbon Markets**

Michaelowa et al. (2021) identify four separate periods of World Bank involvement in international carbon markets related to the phases of the development of these markets over time: a starting phase 1997–2005, a boom phase 2005–2011, a downturn 2012–2015 and a slow restart from 2016 onward, following the adoption of the Paris Agreement.

### ***Starting Phase 1997–2005***

When international market mechanisms for greenhouse gas emission reduction were first included in the Kyoto Protocol in 1997, the details of their functioning were yet to be explored. As an actor with strong economic expertise as well as experience in the policies and politics of developing countries, the World Bank was in an ideal position to take over a leadership role in this phase. Recognizing that market mechanisms could become an attractive area for its own future diversification, the World Bank was also ready to invest significant human resources in the development of this field. The World Bank's key initiative was the launch of the Prototype Carbon Fund (PCF) in 2000 to pioneer carbon market activities and to demonstrate that markets were indeed a useful tool in support of the mitigation of global climate change (Andonova 2010). The PCF aimed specifically at the participation of large companies and governments; 17 private companies and six governments subscribed. At the same time, the World Bank engaged in a broad program developing national strategy studies for the use of market mechanisms by middle- and low-income countries that laid the groundwork for specific mitigation projects to be submitted to the PCF. In 2003 and 2004, the World Bank further broadened its approach by opening two additional trust funds – the Community Development Carbon Fund (CDCF) and the BioCarbon Fund – to explore further synergies with other domains of sustainable development. There are 11 private companies and six governments participating in the BioCarbon Fund (Bio Carbon Fund 2021). In addition, the World Bank got involved in the

conceptual development of concrete methodologies for calculating the volume of emission reductions achieved by different project types.

In this phase, the World Bank could be considered a political entrepreneur (Andonova 2017), mobilizing the latent interest of governments, private entrepreneurs and some NGOs for a common goal at the same time as heavily focusing on establishing itself as the leading international organization responsible for these new markets. While it failed to achieve the latter goal, since different bodies within the UNFCCC were given authority over the methodologies and projects proposed for the international market mechanisms, most of its other activities were clearly successful. Furthermore, the mobilization of interests went beyond the typical activities of an entrepreneur, notably through its strong investment in different institutional approaches and the capacity-building activities. The World Bank's activities also went beyond simple orchestration. They not only provided a platform for exchange and some support measures but also actually forged contractual agreements determining the distinct functional roles of the different actors as investors (governments and some private enterprises) and monitors (civil society and NGOs). In fact, the key concepts of transactions on the international carbon markets and related blueprints were developed under the PCF, including key legal documents, such as emission reduction purchase agreements. This is why we speak of brokerage here. Furthermore, at the same time as enabling the engagement of other actors, the World Bank itself increasingly became a more participatory actor, developing interests similar to those of the investors and consultancy firms active on the market. Its development in this direction became fully visible only in the following period.

### ***Boom Phase 2005–2011***

The Clean Development Mechanism (CDM) which generates emission credits from projects in developing countries took off in early 2005 following a significant increase in demand for emission credits, mainly from companies covered by the EU emissions trading scheme. Prices for emission credits and transaction volumes climbed. Companies in developing countries began to see emission credits as a new type of export commodity. In these conditions of unfettered market dynamics, the World Bank shifted its strategy from pioneering to engaging in high-volume transactions. In a partnership with private carbon brokers and credit buyers, the Umbrella Carbon Facility (UCF) was set up and pooled USD 0.75 billion for the acquisition of 130 million carbon credits from two of the largest projects on the market (Michaelowa et al. 2021).

Another partnership launched in this boom phase tried to resolve problems related to a specific sector, forestry. The CDM rules had excluded forest protection and required afforestation and reforestation projects to issue credits that would only have a limited period of validity. Given that private sector interest to buy such temporary credits was extremely limited, the World Bank brought together governments of many forest-rich countries in the Forest Carbon Partnership Facility (FCPF) in 2008 to address all types of forest-related emissions mitigation.

The goal of the FCPF was to ensure that forestry would be fully included in carbon markets in the future and that advanced, highly aggregated methodologies would enable permanent credits to be granted to forestry-related activities. While no private sector actors were directly involved, donors and activity implementers, such as UN agencies, were part of the governance structure.

### ***Downturn 2012–2015***

The failure of the Copenhagen conference in late 2009 to agree on a reform of the international climate policy regime led to a decline in trust in international carbon markets. This became evident when the EU stopped the import of CDM credits, resulting in a 95 percent decline in emission credit prices by the end of 2012. This in turn led to an exodus of many private market participants. In contrast to the many private emission credit buyers that stopped paying the contractually agreed prices, the World Bank continued to honor its long-term credit acquisition contracts under the different carbon funds (Michaelowa et al. 2021). It set up new initiatives to preserve market niches, such as the Carbon Initiative for Development (Ci-Dev), which bought credits from projects in Sub-Saharan Africa and the Pilot Auction Facility (PAF) that provided a floor price for emission credits from methane-reduction projects through an innovative put option that gives the credit seller the right to sell the credit at a predetermined price. Both initiatives were crucial to ensure that a minimum number of private sector players was preserved. By subsidizing the annual “Carbon Expo” fairs throughout this period, the World Bank provided a venue for various international carbon market players to exchange experiences and helped to sustain an “epistemic community” (Michaelowa, Shishlov and Brescia 2019; Paterson et al. 2014). Regarding the pathways to effectiveness laid out in Chapter 1, the World Bank thus created value for partners, sustained collaboration within the existing partnerships and strongly influenced institutions outside its partnerships. However, the goal of creating thriving international carbon markets could only be attained to a limited extent, as the World Bank was unable to catalyze additional demand for credits.

### ***Slow Restart Since 2016***

The Paris Agreement that came into force in 2016 includes provisions for two new international carbon market approaches: a bilateral one (Article 6.2) and a multi-lateral one under international oversight (Article 6.4). The negotiations on their specific designs took 6 years before being concluded at the UN climate summit (COP26) in Glasgow in late 2021, and full operationalization will be undertaken in the next years. This was due to several lines of conflict regarding the stringency of the new mechanisms, as well as whether or how activities and credits from the Kyoto market mechanisms can be transitioned into the new approaches.

As soon as the ink was dry on the Paris Agreement in 2015, the World Bank developed new partnerships with the aim of upscaling activities and providing a “one stop shop” solution to transfer different kinds of credits. The Transformative

Carbon Asset Facility (TCAF) brought together five countries, but no private sector players, in order to develop blueprints for crediting mitigation policy instruments. The Networked Carbon Markets (NCM) initiative created in 2016 includes governments, private companies, academia and civil society and tries to develop a tool for deriving “exchange rates” between different types of emission credits. The work of the NCM has fed into the design of a “warehouse” to stock different types of credits and link to a “transaction facility” that includes a blockchain-based registry. Moreover, a “climate market club” (CMC), set up by the World Bank, brings together national governments to jointly develop modalities for piloting activities under Article 6.2. These governments can authorize public or private sector entities, sub-national entities or civil society organizations to participate in the CMC. In contrast to the World Bank strategy in earlier phases of the international carbon markets, where the World Bank-brokered initiatives aimed at mobilizing mitigation projects outside the World Bank’s own project pipeline, the key aim of this multi-pronged approach now is to generate revenues from the generation of emission credits of World Bank-owned projects (Michaelowa et al. 2021). This is highly problematic, as these projects are likely to have happened anyway and thus do not fulfil the “additionality” criterion. (See the discussion below regarding the overall effectiveness of the partnership with regard to climate change mitigation.)

### **How World Bank Activities Affected the Conditions for “Pathways to Effectiveness”**

Chapter 1 formulates four propositions regarding the characteristics of partnerships conducive to partnership effectiveness. The authors suggest that the effectiveness of partnerships depends on: (1) sophisticated contracting with the appropriate specificity of commitments and accountability mechanisms; (2) the credible commitment of resources by the different partners; (3) the adaptability of the partnership arrangement; and (4) the capacity of the partnership to foster innovation. In the following section, we reexamine the evidence presented by Michaelowa et al. (2021) to demonstrate the effect of World Bank brokerage activities on each of these four conditions. As we will see, the World Bank’s contribution to establishing these conditions varied substantively over the four periods sketched above.

#### ***Sophisticated Contracting***

World Bank carbon finance was crucial in defining highly elaborated contracts for international carbon markets, which underpinned the PCF. They were widely taken up by the private sector afterwards. Ever since, the different steps (project idea note, project concept note, project design document and validation and verification manual) have been applied throughout international carbon markets, even if regulators implemented slight changes to the original World Bank blueprint. The activities of the NCM, the warehouse and the CMC are trying to replicate this

approach and define the bases of Article 6 activities. While many private actors have suggested that blockchain could be an innovative technology to reduce transaction costs of monitoring, reporting and verification (MRV), the approach chosen by the World Bank is likely to define how blockchain will eventually be used under international carbon markets.

World Bank-developed baseline and monitoring methodologies have served as crucial preconditions for new partnerships in international carbon markets. This has been the case in the first phase of carbon markets when the work of the PCF was important in defining generic principles. However, the World Bank encountered serious resistance by CDM regulators regarding the specificities of baselines, and a significant share of World Bank submissions were rejected (Michaelowa et al. 2021). The TCAF and the CMC have again attempted to develop methodologies for policy crediting. But like CDM regulators in the past, country members of the TCAF and the CMC have been reluctant to embrace the methodological approaches suggested by the World Bank.

With regard to accountability measures, the World Bank has deteriorated over time. Carbon funds developed in the early 2000s had elaborate reporting requirements to funders and the general public, with detailed annual reports and websites providing project-specific information. Post-2015, partnerships like TCAF and the CMC no longer publish annual reports, nor project-specific information. Often, the only way information about these partnerships is made publicly available is through reports from country members, like the UK and Switzerland.

### ***Credible Commitment of Resources***

The World Bank provided its own resources for carbon funds established during the starting phase of international carbon markets. Partners in carbon funds had to credibly commit resources (through unconditional promissory notes or payments into dedicated trust funds) before their participation in funds would be confirmed. For each fund, the World Bank determined *ex ante* the minimum funding level required before a fund would actually be set up. Therefore, prospective participants had the incentive to mobilize other participants in order to ensure that this minimum overall funding level would be attained. Once funds were ready for participation by governments and private sector entities, the participants had to pay in a share of the pledged funding. The World Bank then calculated the annual contributions required until the total of the pledge was reached (Prototype Carbon Fund 2004). The World Bank's brokering activities were particularly important for designing this model and, through it, eliciting a coalition of willing donors interested in supporting the early implementation of carbon offsets, despite the relatively long political gridlock that surrounded the ratification of the Kyoto Protocol. By 2005, when the Protocol came into force, a series of carbon funds and related methodologies were already established through coalitions of states, experts and, in some cases, private actors (Andonova 2010). This model continues until today. However, the World Bank has found it increasingly difficult to mobilize private sector resources. None of the post-2015 partnerships benefits from direct funding

by the private sector. Governments are still willing to contribute to such partnerships, but not to the desired funding volumes. For example, the TCAF that was aiming at a total budget of USD 0.5 billion only reached USD 0.21 billion.

### ***Adaptability of Partnership Arrangements***

If the partnership is defined at a high level of aggregation encompassing all World Bank-led carbon market activities involving private sector actors and governments, a high level of adaptability can be found. Throughout the different phases of international carbon markets, the Bank tried to define new types of vehicles appropriate for the phase in question. For instance, the PCF portfolio focused on large emerging economies and transition countries which were seen as key frontrunners for the still new market mechanisms. When the “gold rush” started, the World Bank tried to benefit by setting up the UCF, focusing on massive HFC-23 projects. Critiques of the World Bank project portfolio by the media and NGOs prompted the creation of capacity-building programs to engage lower income countries, as well as the creation of new funds such as the BioCarbon Fund that could engage in countries that lack large-emissions point sources in industry (Andonova 2010; Andonova and Sun 2019). The Paris Agreement’s call for upscaling carbon markets led to vehicles like the TCAF that tested upscaling beyond projects and programs. The World Bank, as a broker of new carbon market instruments, thus learned from the outcomes of the carbon funds set up during the starting phase of international carbon markets when designing subsequent vehicles.

Within each specific vehicle, especially the carbon funds, adaptability was relatively low – the only exceptions being those funds that had two subsequent tranches. For example, the BioCarbon Fund issued two tranches in 2004 and 2007. Voluntary carbon markets played a larger role in the second tranche than in the first, with the share more than doubling from 6.5 percent of funding to 13.9 percent (BioCarbon Fund 2021). This reflected the recognition that the demand for forestry credits was larger on the voluntary markets, and therefore the fund would be able to sell credits more easily and at better prices. The reform thus led to substantial financial benefits for the participants in the fund.

A clear lesson can also be seen in the design of the Partnership for Market Implementation (PMI), which is the direct successor of the Partnership for Market Readiness (PMR). The PMR aimed to support countries in introducing carbon pricing instruments, like emissions trading schemes and carbon taxes. However, most of the funding vanished in government bureaucracies without such policy instruments actually being set up. When designing the PMI, the World Bank put a much larger focus on ensuring that activities under the initiative would be directed toward this aim.

### ***Fostering Innovation***

The World Bank engaged in innovation in international carbon markets in different “waves” linked to the specific phases of the market. In the early 2000s during

the starting phase of the World Bank's engagement, it tried to lay the basis for concrete transactions through the careful elaboration of blueprints for each element of the project cycle. Here, different stakeholders were brought in, including lawyers to elaborate contractual clauses; independent audit companies to develop the approach to third-party validation and verification; and engineers and economists who could elaborate baseline and monitoring methodologies. During the boom phase of the market, the activities focused on sectors that were underrepresented in the market, such as avoiding deforestation. Here, innovation related to the development of "nested" and jurisdictional approaches to forest protection. During the downturn, innovation generally declined, but the PAF for the first time developed an approach that enabled the generation of an effective floor price for mitigation credits in the future. Project developers could bid for the price of a put option, which would guarantee them a fixed sales price per emissions credit. In the restart phase innovation again accelerated and focused on the development of methodologies for upscaled crediting, the development of procedures to calculate exchange rates between different types of emissions credits and the use of block-chain for transactions and MRV systems.

A significant amount of the innovation developed through the World Bank-led partnership(s) has been decisive in shaping international carbon markets. This is particularly the case for the innovation undertaken in the starting phase. The set of documentation developed by the PCF for each step of the project cycle continues to shape the way in which international carbon markets operate. But not all innovation undertaken by the World Bank was successful. Many baseline methodologies were rejected by the regulators. The Carbon Delivery Guarantee to reduce the risk of investment in mitigation projects was not endorsed by private sector project developers. Methodologies for upscaled crediting have not been taken up by other international carbon market players. The approach of the NCM to calculate exchange rates between different credit types has been severely criticized by carbon market specialists and, so far, has not been operationalized.

## **Linking the Creation of Conducive Conditions to Goal Achievement**

In this section, we try to highlight plausible links between the successful creation of the above conditions and the actual achievement of the goals considered through different pathways to effectiveness. When the World Bank's brokerage was successful, how far did it effectively contribute to the attainment of the partnership's goals, value creation for partners, collaboration inside the partnerships and to an impact on institutions (notably carbon markets) outside the partnerships and, eventually, on affected populations?

The overall problem targeted by the partnerships brokered by the World Bank is anthropogenic climate change, more specifically greenhouse gas emissions from private and public activities. This problem has persisted over recent decades and gained in relevance over time. Clearly, the activities undertaken under international carbon markets can address climate change only if they actually lead

to greenhouse gas emission reductions. The overarching goal of the partnerships was to catalyze international carbon markets to offer governments and the private sector the possibility to reach emissions commitments through access to emission credits at lower costs. Ideally, this should lead to a willingness to make more stringent commitments. Yet, the latter is not easily demonstrated. In addition, it has sometimes been possible to create emission credits for activities that do not mitigate emissions, as we elaborate in the discussion on additionality below. Hence, rather than mutual support between private benefits and the overall goal, there can be an inherent tension between financial benefits for individual participants and the global public good of climate change mitigation. This tension has persisted in the partnerships over time.

Even regarding the more direct objective of creating efficient emission reduction opportunities, the degree to which this can be considered successful has changed over time. It can clearly be said that looking at the situation around 2010, the goal of providing access to cheap credits seemed to have been achieved in an overwhelmingly successful manner. But revisiting the question in 2013, after the price crash for emission credits, would probably have led to a completely different assessment – namely an assessment of complete failure. This consideration shows that the partnerships could not control one of the key parameters: demand for emission credits in the larger carbon market significantly depends on a range of political and economic contextual factors. This will remain the “Achilles’ heel” of partnerships in the international carbon markets, unless the partnerships can credibly show how they mobilize a critical mass of demand. A precondition for such demand is that international carbon markets are perceived as mobilizing additional emission reductions and not generating emission credits from “business-as-usual” activities. Historically, the World Bank did not put an emphasis on stringent additionality provisions in the methodologies developed under its initiatives. This was the case both in the starting phase of the CDM, when various World Bank-led methodologies were rejected for that reason, as well as in the post-2015 restart phase when draft methodologies, developed under TCAF, were criticized by both researchers and governments participating under TCAF. As the World Bank did nothing to apply concepts proposed by researchers that might ensure additionality (Greiner and Michaelowa 2003) and could have allayed the concerns of NGOs and experts (see, e.g., Schneider 2009), it jeopardized the goal achievement of its partnerships.

Projected value creation for partners related to the generation of emission credits for private sector participants and were subject to stringent domestic climate policy instruments and stable access to competitively priced emission credits for government participants. For the World Bank, value was fuzzier, related to generating revenues from the administration of trust funds, generating reputation due to being a pioneer in a new field and generating synergies linking development and climate change-related work streams (Michaelowa et al. 2021; see also Flues, Michaelowa and Michaelowa 2010, 5; Michaelowa and Michaelowa 2011). Governments saw value in the public goods the partnership created that would have been too expensive for single governments to develop, including baseline

and monitoring methodologies and blueprints for the project cycle. The brokering role of the World Bank in partnerships created political value for proactive industrialized country governments, which sought to promote the development of carbon markets and engagement of developing countries during a period of deep stagnation in international climate negotiations (Andonova 2017). In fact, the Dutch government had set up its own procedures for emission credit procurement through the CERUPT and ERUPT tender programs in the early 2000s but discontinued these programs once the World Bank partnership gathered steam. The Netherlands then set up a dedicated carbon fund under the World Bank umbrella. For some government participants, a longer-term value aspect was to enable more ambitious international climate policies due to the proof that emission reductions were not prohibitively expensive.

The value creation of the partnership was uneven, depending on the time horizon. Governments and private sector participants that needed credits at a specific point in time before 2011 were getting issued credits earlier and more cheaply than through other avenues, particularly if they invested in the UCF. This partnership managed to create value for partners by combining resources for transactions with attractive pricing. The price of USD 6 per credit was significantly lower than the price of smaller transactions on the market, that on average reached USD 11 in 2006 (World Bank 2007). Due to the sheer size of the UCF, transaction costs for participants were lowered by the involvement of the World Bank. It should be noted that the transactions of the UCF which came from projects aimed at reducing the industrial gas HFC-23<sup>1</sup> generated a lot of scrutiny and discussions about perverse incentives which could lead to an increase in emissions (see, e.g., Andonova 2010; Wara 2007). This led to NGOs becoming critical of international carbon markets and triggered political movements prohibiting the use of CDM credits in the EU emission trading scheme (Michaelowa et al. 2019).

Furthermore, partners did not always get the amount of credits they had envisaged because many projects, with which the early generation carbon funds had contracted emission reduction purchase agreements, had underperformed and not delivered the credit quantity forecast. Moreover, the crash in the price for emission credits from 2011 onward meant that private sector players who waited before buying emissions credits could get the credits much more cheaply than those that participated in the World Bank carbon funds. The same applies to government participants. A government buying credits in 2013 to cover its shortfall under the first commitment period of the Kyoto Protocol would have had to spend an order of magnitude less than a government that invested in a carbon fund at the World Bank in 2003–2004.

With regard to collaboration inside the partnership, the role of the private sector has diminished over time, while that of governments has increased. This is due to the fact that private sector entities did not see a need to engage in such a partnership once the market, particularly the CDM, had matured. From 2005 onward, there was a wide range of credit supply available on the market and, given the emergence of versatile project developers and intermediaries, the advantage that

World Bank carbon funds held in the beginning had dissipated. Given that after 2012 private sector entities could not use emission credits in most jurisdictions – and this has not changed since the Paris Agreement came into force – they have not reentered the new World Bank initiatives under Article 6. The scope of government collaboration has broadened over time with the World Bank branching out into niches such as action in Least Developed Countries. Yet, the range of governments involved in World Bank carbon finance has remained relatively stable over time.

The influence of the World Bank-led partnerships on collaboration and institutions outside the partnership is multifaceted and has evolved over time. The partnerships clearly enabled a faster emergence of international carbon markets as the boom period could build on their conceptual groundwork. These partnerships were also a core around which an “epistemic community” of carbon market actors developed. However, it could be argued that the World Bank-led partnerships also contributed to a crowding out of other initiatives. For example, the subsidization of the “Carbon Expo” fair led to the demise of the privately organized “Carbon Market Insights” fair when the boom phase of the market ended. A bottom-up organized template for an emission reduction purchase agreement by a consortium of lawyers from developing and industrialized countries in the starting phase of the CDM market was pushed aside by the contract model provided by the PCF that focused on industrialized country interests. Equally, the carbon funds set up by the World Bank for specific governments like Spain, Italy and the Netherlands replaced private sector-led offers to manage carbon funds for these governments.

## **Conclusion**

In the last two decades, the World Bank has played a key role in brokering partnerships on international carbon market action involving governments and private sector actors. Under the umbrella of “World Bank carbon finance,” a range of specific carbon funds and initiatives were set up that played a crucial role in the operationalization of the Kyoto mechanisms in the early 2000s and, since then, have contributed to innovation in these markets. Given that private sector partners no longer received relevant value from the partnerships after the CDM matured, they became less engaged over time.

As international carbon markets have evolved in three distinct periods since their emergence around 2000, the characteristics of the partnerships have changed. Among the four characteristics of partnerships deemed as relevant for their effectiveness, as specified in Chapter 1, high specificity of commitments and accountability as well as credibility of commitments were particularly prominent during the early phase of the World Bank-brokered partnerships, when the various initiatives were a model of transparency and all involved partners were willing to commit sizeable resources. Over time, accountability has declined together with resource commitments by partners. Still, compared to other types of partnerships, the credibility of commitments remains much

higher given that for any initiative of the World Bank, partners need to provide legally binding promissory notes.

Adaptability has been high on the “umbrella” level with the spawning of new initiatives by the World Bank throughout the period, whose characteristics clearly indicate lessons learned from experiences with previous initiatives. It has been lower at the level of the individual initiatives, with only a few initiatives being able to change their approach over time. Only a few initiatives have been discontinued, but many have considerably reduced their activities. Innovation has been the declared aim of the partnerships, but its actual level has changed over time: periods of rapid innovation alternated with periods of revenue maximization for selected partners.

Overall, the World Bank has successfully played a role as broker for partnerships on international carbon markets that have been sustained over several decades in rapidly changing conditions. These partnerships have been effective in making international carbon markets a key tool of international climate policy in the second half of the 2000s. However, the World Bank’s lenient approach to additionality led to growing criticism of international carbon markets by NGOs and media. It thereby contributed to the fall in demand for emissions credits that led to a stalling of international carbon markets between 2012 and 2015. While the partnerships were creating value for their partners, at least as long as the carbon markets were thriving, this value creation was at least partially achieved by not prioritizing sufficiently ambitious projects early on in order to achieve a more effective provision of the public good of climate change mitigation. The underlying problem of climate change and mitigating it through the globally most cost-effective means remains as burning an issue as before the start of the partnerships.

Whether the new initiatives of the World Bank, in the context of the market mechanisms under the Paris Agreement, will be as effective as the initiatives of the early 2000s regarding the Kyoto mechanisms remains to be seen, but it is likely that effectiveness will be lower today. In particular, the risk of pushing non-additional activities persists, as the World Bank has explicitly stated its interest in bringing its own pipeline of projects financed through classic World Bank loans into carbon markets under Article 6 (Michaelowa et al. 2021). If the World Bank does not change its approach with respect to observing strict additionality of projects, it may jeopardize the international carbon markets at large, because of its influence on additionality practices and the potential backlash by advocacy critics of market mechanisms as instruments for addressing climate change. Such an outcome would mean that the overall goal of the partnerships in supporting the development of robust carbon markets could be compromised, unless the long-term goal of addressing climate change through more ambitious additionality criteria is prioritized over the short-term value creation for the broker and key members of the partnerships. A lot will now depend on how the international community operationalizes the strict principles agreed for Article 6 at COP26 in Glasgow. If it manages to properly implement these principles in actual methodologies and approaches applied “on the ground” in international carbon markets, the risk outlined above may not materialize.

## Note

- 1 HFC-23, a potent hydrofluorocarbon, does not deplete ozone but it is a greenhouse gas that has increased over the past decade despite international environmental agreements aimed at its reduction (Stanley et al. 2020).

## References

- Abbott, Kenneth W. and Duncan Snidal. 2010. International Regulation without International Government: Improving IO Performance through Orchestration. *Review of International Organizations*, 5, 315–344.
- Abbott, Kenneth W., Philipp Genschel, Duncan Snidal and Bernhard Zangl, eds. 2015. *International Organizations as Orchestrators*. Cambridge: Cambridge University Press.
- Andonova, Liliana B. 2010. Public-Private Partnerships for the Earth: Politics and Patterns of Hybrid Auth in the Multilateral System. *Global Environmental Politics*, 10:2, 25–53.
- Andonova, Liliana B. 2017. *Governance Entrepreneurs: International Organizations and the Rise of Global Public-Private Partnerships*. Cambridge: Cambridge University Press.
- Andonova, Liliana B. and Yixian Sun. 2019. Private Governance in Developing Countries: Drivers of Voluntary Carbon Offset Programs. *Global Environmental Politics*, 19:1, 99–122.
- BioCarbon Fund. 2021. What is the BioCarbon Fund. Available at <https://www.biocarbonfund.org/about-us>.
- Boasson, Elin L. and Dave Huitema. 2017. Climate Governance Entrepreneurship: Emerging Findings and a New Research Agenda. *Environment and Planning C: Politics and Space*, 35:8, 1343–1361.
- Christopoulos, Dimitrios and Karin Ingold. 2011. Distinguishing between Political Brokerage and Political Entrepreneurship. *Procedia Social and Behavioral Sciences*, 10, 36–42.
- Christopoulos, Dimitrios and Karin Ingold. 2015. Exceptional or Just Well Connected? Political Entrepreneurs and Brokers in Policymaking. *European Political Science Review*, 7:3, 475–498.
- Flues, Florens, Axel Michaelowa and Katharina Michaelowa. 2010. What Determines UN Approval of Greenhouse Gas Emission Reduction Projects in Developing Countries? An Analysis of Decision Making on the CDM Executive Board. *Public Choice*, 145:1, 1–24.
- Greiner, Sandra and Axel Michaelowa. 2003. Defining Investment Additionality for CDM Projects—Practical Approaches. *Energy Policy*, 31:10, 1007–1015.
- Hale, Thomas and Charles B. Roger. 2014. Orchestration and Transnational Climate Governance. *Review of International Organizations*, 9:1, 59–82.
- Michaelowa, Axel and Katharina Michaelowa. 2011. Climate Business for Poverty Reduction? The Role of the World Bank. *Review of International Organizations*, 6:3–4, 259–286.
- Michaelowa, Axel, Igor Shishlov and Dario Brescia. 2019. Evolution of International Carbon Markets: Lessons for the Paris Agreement. *WIREs. Climate Change*, 10, e613.
- Michaelowa, Axel, Katharina Michaelowa, Igor Shishlov and Dario Brescia. 2021. Catalysing Private and Public Action for Climate Change Mitigation: The World Bank’s Role in International Carbon Markets. *Climate Policy*, 21:1, 120–132.

- Mintrom, Michael. 1997. Policy Entrepreneurs and the Diffusion of Innovation. *American Journal of Political Science*, 41:3, 738–770.
- Mintrom, Michael and Phillipa Norman. 2009. Policy Entrepreneurship and Policy Change. *Policy Studies Journal*, 37:4, 649–67.
- Paterson, Matthew, Matthew Hoffmann, Michele Betsill and Steven Bernstein. 2014. The Micro Foundations of Policy Diffusion Toward Complex Global Governance: An Analysis of the Transnational Carbon Emission Trading Network. *Comparative Political Studies*, 47:3, 420–449.
- Prototype Carbon Fund. 2004. *Annual Report 2004*. Washington, DC: World Bank.
- Provan, Keith G. and Patrick Kenis. 2008. Modes of Network Governance: Structure, Management, and Effectiveness. *Journal of Public Administration Research and Theory*, 18:2, 229–252.
- Reinsberg, Bernhard, Katharina Michaelowa and Stephen Knack. 2017. Which Donors, Which Funds? The Choice of Multilateral Funds by Bilateral Donors at the World Bank. *International Organization*, 71:4, 767–802.
- Reinsberg, Bernhard, Igor Shishlov, Katharina Michaelowa and Axel Michaelowa. 2020. Climate Change-related Trust Funds at the Multilateral Development Banks. Report on behalf of the German Federal Ministry for Economic Cooperation and Development. German International Cooperation (GIZ): Eschborn. Available at <https://www.zora.uzh.ch/id/eprint/188309/>.
- Schneider, Lambert. 2009. Assessing the Additionality of CDM Projects: Practical Experiences and Lessons Learned. *Climate Policy*, 9:3, 242–254.
- Stadtler, Lea and Özgü Karakulak. 2020. Broker Organizations to Facilitate Cross-Sector Collaboration: At the Crossroad of Strengthening and Weakening Effects. *Public Administration Review*, 80:3, 360–380.
- Stadtler, Lea and Gilbert Probst. 2012. How Broker Organizations Can Facilitate Public-Private Partnerships for Development. *European Management Journal*, 30:1, 32–46.
- Stanley, Kieran M., Daniel Say, Jens Mühle, Cristina M. Harth, Paul B. Krummel, Dickon Young, Simon J. O’Doherty, Peter K. Salameh, Peter G. Simmonds, Ray F. Weiss, Ronald G. Prinn, Paul J. Fraser and Matthew Rigby. Increase in Global Emissions of HFC-23 Despite Near-Total Expected Reductions. *Nature Climate Communications*, 11:1, 1–6.
- Wara, Michael. 2007. Is the Global Carbon Market Working? *Nature*, 445:7128, 595–596.
- World Bank. 2007. *State and Trends of Carbon Markets*. Washington, DC: World Bank.