

COP 25: Negotiating the Rules for a Future Global Carbon Market Under Article 6

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The Article 6 rulebook: Laying the foundations of a future global carbon market

The design of the rulebook for Article 6 of the Paris Agreement is one of the most significant and highly anticipated outcomes of the twenty-fifth session of the Conference of the Parties (COP 25) taking place in Madrid in December 2019. Article 6 represents an essential piece of the architecture of the Paris Agreement, providing for voluntary cooperation between Parties to help them meet their nationally determined contributions (NDCs) in a more economically efficient manner, thereby enabling higher levels of overall emissions mitigation while promoting sustainable development. In addition, it can play an important role in supporting the progression of NDCs toward wider coverage and enhanced ambition by strengthening their features. It also promotes global linkages and synergies across carbon pricing schemes and instruments.

Article 6 thus lays the foundations for the future development of a global carbon market. Its provisions include both market and non-market approaches. Under Article 6.2, Parties engaging in voluntary cooperation may use “collaborative approaches” in the form of internationally transferred mitigation outcomes (ITMOs), while Article 6.4 provides for a mechanism to deliver an overall mitigation in global emissions (OMGE) — in essence, a global crediting mechanism for greenhouse gas (GHG) emissions reductions (A6.4ERs). As an alternative to engaging in voluntary cooperation using market-based mechanisms, Article 6.8 provides for non-market approaches that are intended to be “integrated, holistic and balanced,” covering areas such as mitigation, adaptation, finance, energy efficiency schemes, avoidance of GHG emissions, technology transfer and development, capacity-building or integrated water management and the integral and sustainable management of forests (UNFCCC 2019c).

Negotiating Article 6: The technical and political challenges

Parties’ inability to reach a consensus on the rulebook for Article 6 at COP 24 in Katowice was partly a consequence of the highly technical nature of the negotiation process itself, in particular regarding the design of the market-based mechanisms of Articles 6.2 and 6.4. There are technically challenging issues on which Parties need to agree. These include selecting metrics to define ITMOs and A6.4ERs in the context of NDCs that are heterogeneous (involving single-year and multi-year NDCs, with greenhouse gas [GHG] targets and non-GHG targets or a combination of both); defining corresponding adjustments; issues of scope; safeguards and limits; tracking, verification and reporting, and the share of proceeds from Article 6 mechanisms. Defining robust accounting guidelines, rules and methodologies to avoid double counting, and reaching a common understanding on key concepts such as environmental integrity or the OMGE principle, are fundamental aspects of this process (UNFCCC 2019d).

Political factors also impeded the successful conclusion of the Article 6 rulebook in Katowice. The genesis of the market-based provisions of Article 6 provides an insight into the underlying dynamics at play between Parties. The inclusion of market-based mechanisms into the text of the Paris Agreement was the result of a last-minute compromise between Brazil and the European Union (EU). A broad dividing line separates proponents of a top-down, centralized United Nations Framework Convention on Climate Change (UNFCCC) framework, mainly Brazil and the Group of 77 (G77),¹ and those in favor of a bottom-up approach based on robust accounting rules, such as the EU.

¹ The G77 at the United Nations is a coalition of 134 developing countries (with 77 founding members).

As a recipient of projects under the Kyoto Protocol's Clean Development Mechanism (CDM), Brazil envisioned the new market mechanisms of Article 6 as an update of the CDM, whereas many 'developed country Parties,' such as the EU, saw in Article 6 an opportunity for recognizing existing initiatives such as domestic and regional emissions trading schemes (Muller 2018).

Striking a balance or compromise between top-down, centralized UNFCCC oversight and bottom-up, 'bounded flexibility' (or choice within limits) is thus a central theme of the negotiations. Brazil and the EU perceive their respective positions to be the best means of preserving environmental integrity and the credibility of the international climate change regime. The way in which negotiations are resolved, both at COP 25 and beyond, could moreover define the shape of a global carbon market under Article 6 for decades to come. While well-designed rules could unlock the vast economic and technological potential of an increasingly interconnected global market, a dysfunctional rule set would be difficult to reverse and could risk jeopardizing existing achievements and future opportunities.

Article 6: Delivering economic efficiency gains and enhanced mitigation action at scale

The fundamental value of Article 6 lies in its potential to significantly reduce the costs of mitigation by using countries' differing marginal costs of abatement to achieve efficiency gains. A recent report published by the International Emissions Trading Association (IETA) estimates that Article 6 has the potential to reduce the total cost of implementing NDCs by about \$250 billion per year in 2030, effectively facilitating the removal of 50% more emissions (around 5 gigatonnes [Gt] of carbon dioxide per year in 2030) at no additional cost (Edmonds et al. 2019). Currently, around half of the signatory Parties to the Paris Agreement have expressed a willingness to use international market mechanisms to meet their NDC goals (WRI 2019).

Well-designed market-based mechanisms will also be instrumental in encouraging countries to enhance their mitigation efforts. NDCs are to be ratcheted up on a five-year cyclical basis under the terms of the Paris Agreement. This process is fundamental to closing the emissions gap, which will require an unprecedented ramping up of countries' abatement efforts. According to the United Nations Environment Programme's (UNEP's) "Emissions Gap Report 2018," it is technically still possible to bridge the emissions gap so that global warming stays well below 2 degrees Celsius (°C) and 1.5°C above pre-industrial levels, if NDCs are sufficiently increased by 2030. Total annual GHG emissions reached 53.5 Gt of CO₂ equivalent (GtCO₂e) in 2017, with current NDCs estimated to lower global emissions in 2030 by up to 6 GtCO₂e compared with a business-as-usual-scenario. According to UNEP, this level of ambition would need to be roughly tripled in order to meet the 2°C objective and increased fivefold to meet the 1.5°C objective (UNEP 2018, xv).

Accelerating the deployment of clean energy technology worldwide while delivering sustainable economic growth is a prerequisite to fulfilling this ambition.

The International Energy Agency (IEA) estimates that only seven out of 39 critical technologies are currently on track to meet the criteria of the IEA Sustainable Development Scenario (which includes meeting the Paris Agreement's well below 2°C objective, and the goals of universal energy access and substantially reducing air pollution) (IEA 2019). The Paris Agreement and the market-mechanisms of Article 6 represent an opportunity to accelerate the deployment of clean technologies, both by increasing their cost-effectiveness and by helping to overcome historical barriers to their deployment.

Policy innovation will have a crucial role to play. Concepts are being developed to create a space for innovative mechanisms under Article 6. This could represent an opportunity for vital, low-carbon technologies that are currently stalled, such as carbon capture and storage (CCS). This technology deployment could benefit from a CCS-specific mechanism under Article 6 in the form of a new tradable asset class or carbon storage unit (CSU) representing one verified tonne of CO₂ stored or sequestered geologically with no intrinsic emissions value (Zakkour and Heidug 2019). This innovative concept, developed by KAPSARC researchers, helps reframe the climate challenge as one of managing carbon stocks rather than emission flows. It thus emphasizes the value of climate action on the supply side and the role that hydrocarbon-rich countries can play in helping solve the climate change problem, in line with the idea of a circular carbon economy.

Designing an effective Article 6 rulebook for the deployment and preservation of carbon sinks

The Paris Agreement is set to replace the Kyoto Protocol in 2020. The universal nature of the Paris Agreement, as well as the fact that it is not time-limited, put the market-based mechanisms of Article 6 on a stronger footing than their predecessors under the Kyoto Protocol (UNFCCC 2019a). The market mechanisms of Article 6 could give rise to a global carbon market with a potential economic value estimated to reach \$222 billion in 2030, \$572 billion in 2050, and as much as \$1.43 trillion in 2100 (Yu et al. 2018). Indeed, they come at a time when climate policies and carbon pricing mechanisms are emerging and interconnecting worldwide, and when mitigation options such as carbon sinks will become increasingly important.

Designing international market-based mechanisms that are integrated and inclusive could thus generate significant economic opportunities for new entrants, particularly oil-producing countries, some of which, such as Saudi Arabia, are planning to introduce their own carbon trading systems (El Gamal 2019). Under well-designed rules, such systems could be connected to a global network of carbon pricing mechanisms operating within the purview of Article 6. Countries endowed with significant potential for geological carbon storage would be incentivized into deploying carbon capture, utilization and storage (CCUS).

Finally, designing the rulebook for a well-functioning universal carbon trading market under Article 6 could also create effective economic incentives for the preservation of natural carbon sinks, such as rainforests, that are currently imperiled by negative economic incentives. The outcome of the Article 6 negotiations at COP 25 and beyond may yield part of the solution to the 'global commons tragedy' that characterizes the climate change problem.

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