

MANDATE: FCCC/PA/CMA/2023/L.12, para. 11

29 March 2024

Dear Ms. Blatter, Mr. Nasr & Stakeholders,

ISSUE: Sharm el-Sheikh dialogue on Article 2, paragraph 1(c), of the Paris Agreement and its complementarity with Article 9 of the Paris Agreement

please accept this submission for building on the Sharm el-Sheikh dialogue in 2024-2025. We believe our submission provides valuable insights and innovative approaches that can contribute significantly to the discussions and outcomes of the Sharm el-Sheikh dialogue and the Paris Agreement.

Executive Summary

The submission presents an international climate policy, the carbon reward, aimed at aligning global financial flows with the decarbonization goals of the Paris Agreement. This policy can foster a common market-and-monetary framework for intergovernmental negotiations and a new pathway for understanding and guiding the implementation of Article 2.1c. This policy includes three innovative elements: (i) a new international financial asset, called a tradable carbon asset; (ii) a market policy featuring a mitigate-and-trade mechanism with central bank involvement; and (iii) a supporting economic theory for 'carrot and stick carbon pricing'.

The carbon reward policy is designed to offer debt-free conditional grants to a wide array of climate mitigation projects, encouraging significant reductions in greenhouse gas emissions, atmospheric carbon removal-and-storage, and promoting regenerative co-benefits for communities, ecosystems, and industries. The policy emphasizes a heuristic/responsive market-driven approach to mitigation finance, projecting an annual financial contribution of about \$3-6 trillion per year from 2030 to 2050 and extending indefinitely as needed. Notably, the carbon reward will circumvent the limitations of carbon credits by not transferring legal rights to mitigated carbon, thus avoiding greenwashing. The carbon reward will also simplify the management of nationally determined contributions (NDCs) and internationally traded mitigation outcomes (ITMOs).

The policy will establish a dynamic price floor for the carbon asset via central bank participation, ensuring its attractiveness to investors without direct stakeholder costs. The policy creates new economic pathways and frameworks to support sustainable development goals, suggesting a significant reform to the international financial architecture. Recommendations for advancing this policy include engaging stakeholders in the Sharm el-Sheikh dialogue 2024-25 through workshops, technical dialogues, and feasibility studies.

Table of Contents

1. Introduction
2. Policy Description
 - 2.1 Policy Background
 - 2.2 Carbon Reward Policy
 - 2.3 Market-Based Tool
 - 2.4 Financial Mechanism
 - 2.5 Operationalization
 - 2.6 New Economic Theory
3. Context for the Sharm el-Sheikh Dialogue
 - 3.1 Targeting a Specific Global Carbon Balance
 - 3.2 Energy Asset Exchanges
 - 3.3 Energy Supply-Demand Balancing
 - 3.4 Regenerative Co-Benefits
 - 3.5 Atmospheric Carbon Removal-and-Storage
4. New Financial Architecture: A Special Context
5. Recommendations

1. Introduction

This submission is concerned with a new international climate policy — called a *carbon reward* — that has the scope to transform the international financial architecture to align with Article 2.1c of the Paris Agreement, and to generally align with the views of Party and non-Party stakeholders, as presented in the UNFCCC addendum report for 2022-23 (dated 9 November 2023).

The carbon reward policy has three major features that are distinctive and noteworthy, namely:

- (1) It refers to a new international financial asset, notionally called a *tradable carbon asset*, that will be supplied as a conditional grant to a diverse range of climate mitigation projects in response to their mitigation outcomes, however the carbon asset will not transfer legal rights to the mitigated carbon and thus it will not function like a carbon credit.
- (2) It refers to a new type of international market policy that includes a new financial mechanism (technically called *mitigate-and-trade*) and a new public finance guarantee that will require the involvement of central banks.
- (3) It refers to a new economic theory (notionally called *carrot and stick carbon pricing*) that supports the carbon reward policy and is also compatible with standard economic theories and policies.

2. Policy Description

2.1 Policy Background

The carbon reward is a new international climate policy with an innovative financial mechanism and a supporting economic theory. The policy has its roots in scholarly work beginning in 2014¹, and it was developed by our non-profit non-governmental organization (currently without observer status) between 2021-24. The defining characteristics of the policy are described below.

2.2 Carbon Reward Policy

The carbon reward policy is designed to establish a reliable pathway towards low greenhouse gas (GHG) emissions and climate-resilient development, and more specifically it can be used to target the main goals of the Paris Agreement.

The carbon reward policy is designed to provide *debt-free conditional grants* in ways that are scalable, cost-effective, and coordinated for strategically decarbonizing the global energy system and major industries, including hard-to-abate industries. The carbon reward should be applied when standard policies are ineffective or inadequate, and it should be viewed as the complement to carbon taxes and other standard policies.

The scale of newly generated direct finance will be in the range of \$3-6 trillion annually — or more/less as required — between 2030 and 2050. The new finance will continue beyond 2050 into the indefinite future. The actual amount of new finance will be adjusted via a periodic recalibration of the financial mechanism given that the policy adopts a heuristic market-driven approach. The heuristic approach will responsively adapt to changing circumstances, such as climate feedbacks, technological progress, and socioeconomic trends.

2.3 Market-Based Tool

The carbon reward policy will introduce a new financial asset, notionally called a tradable carbon asset. One unit of the carbon asset will represent *1 tonne of CO₂e that is strategically mitigated for 100 years or more*. The carbon asset will be offered for (1) significant and strategically important reductions in greenhouse gas emissions, and (2) atmospheric carbon removal-and-storage.

Furthermore, projects can be incentivized to provide regenerative co-benefits for communities, ecosystems and industries via a “Robin Hood” scheme. The Robin Hood scheme is a secondary incentive that is created when a portion of the reward payments are taken from harmful projects and given to regenerative projects — thus creating competition for regenerative solutions (refer Section 3.4).

¹ <https://globalcarbonreward.org/key-references/>.

A major feature of this market-based approach is that the verified stock of mitigated carbon will be retired immediately and will not be traded in carbon markets. In other words, the carbon asset only trades economic value, and it does not trade rights to the mitigated carbon. These features of the carbon asset imply that the asset:

- is not a carbon credit,
- is not available for carbon offsetting,
- is not an internationally traded mitigation outcome (ITMO),
- will not complicate ITMO exchanges, and
- will not complicate nationally determined contributions (NDCs).

The above features of the carbon asset will ensure maximum flexibility for countries with regards to their NDCs and ITMOs, while reducing reliance on carbon offsetting and thus reducing greenwashing and the associated risk to the global stock-take.

Furthermore, capacity building and technology acquisition will be facilitated through service level agreements (SLAs) that will accompany every commercial transaction under the policy. A committee for good governance will oversee the policy implementation, and operational work will be web-based for global information sharing and coordination.

2.4 Financial Mechanism

From an economic perspective, the carbon reward is actually a mitigate-and-trade scheme that will begin with:

- flexible reward prices for conventional emissions reductions;
- explicit reward prices for atmospheric carbon removal and storage; and
- reward adjustments for social and ecological co-benefits.

The mitigate-and-trade scheme is underpinned by the following application of the carbon asset:

- it will be openly traded by the private sector in a frictionless manner, and this will channel the mitigation cost into a redistribution of private investments;
- it will be purchased on occasion by central banks to establish a dynamic price floor for the carbon asset (this is the public finance guarantee);
- it will avoid carbon offsetting and greenwashing; and
- it will avoid an over-reliance on carbon taxes and other policy 'sticks' that might attract political conflict.

A new international central bank policy, called carbon quantitative easing (CQE), is proposed to enforce a public finance guarantee. CQE is an internationally coordinated form of quantitative easing (QE), and it differs from conventional QE because it will be implemented long-term, strategically, and it will only target the productive sectors of the economy to support decarbonization. The main aim of CQE

is to mobilize private finance for climate mitigation by managing the capital appreciation (and capital depreciation) of the tradable carbon asset. In other words, CQE will be used to defend a dynamic price floor for the asset. The carbon asset will thus be investible and attractive to investors.

The details of the financial mechanism are provided in separate reports — however the most important point is that there will be no direct cost for stakeholders because the mitigation cost will be channeled into a combination of private investments and globally-uniform monetary inflation. The overarching benefits of this financial mechanism will be:

- a definitive path for financial flows, eliminating ambiguity and fostering international cooperation, and
- aligning the global financial system with sustainable development and the climate goals of the Paris Agreement.

2.5 Operationalization

The carbon reward policy is currently available for detailed study and proof-of-concept field trials. This should include economic assessments and feasibility studies involving subject experts and stakeholders.

The pathway to implementation is flexible because it may be tested/evaluated by Parties and non-Party stakeholders, and it may then be piloted by a club of Parties under the UNFCCC.

The policy can be implemented through web-based platforms and with the tracking and reporting arrangements that meet the enhanced transparency framework under the Paris Agreement and other relevant standards for currency markets and commodity trading.

2.6 New Economic Theory

A new heterodox market theory — notionally called ‘carrot and stick carbon pricing’ — was developed/discovered over the past ten years to support and advance the carbon reward policy. The new theory introduces a major new concept: the idea that the market failure in carbon is a ‘systemic market failure’ because it features system interconnectedness and the potential to result in political gridlock, climate feedback loops, climate tipping points, and cascading events that could be permanently disruptive to the economy, climate, and Earth systems.

The new theory opens a door to new social agreements and economic development pathways that could potentially succeed where carbon taxes and other ‘sticks’ have faltered. A key difference between the standard theory and the new theory is that the later theory proposes that *two independent prices* are needed to manage the social cost problem and the systemic risk problem. The systemic risk is priced with rewards

determined from cost-effectiveness analysis, whereas the social cost is priced with taxes determined from cost-benefit analysis. In this respect, the heterodox theory does not discard the standard theory, but rather it augments it with a complementary approach that was previously missing.

The headline implications of 'carrot and stick carbon pricing' are that it can potentially resolve the following problems:

- political intransigence and the shortcomings of standard market policies;
- climate feedback loops, climate tipping elements, and cascading events;
- uncertainties inherent to the estimation of the social cost of carbon; and
- the inherent problem of time discounting and ignoring future generations.

The economic theory also explores the historical relationship between the global energy supply and the prevailing monetary system, and it includes new diagrams and formulas that relate net carbon emissions to global energy demand and to economic activity. These topics are related to the problem of sustainable growth.

3. Context for the Sharm el-Sheikh Dialogue

The carbon reward policy (and the tradable carbon asset) opens a door to new strategies for achieving Article 2.1c of the Paris Agreement. The most important of these strategies are:

- macroeconomic planning for targeting a specific *global carbon balance*,
- financial guidance for *energy asset exchanges*,
- financial guidance for *energy supply-demand balancing*,
- stakeholder guidance for *regenerative co-benefits*, and
- financial planning for a safe level of *atmospheric carbon removal-and-storage*.

The above policy strategies may be the focus of future meetings and workshops to explore the potential of the carbon reward policy. The above strategies are explained below with concise wording.

3.1 Targeting a Specific Global Carbon Balance

The carbon reward policy can be used to target a specific global carbon balance while attracting inter-governmental cooperation. The political feasibility of the approach is based on the idea that the policy does not create any direct costs for private stakeholders or for governments in terms of their fiscal planning.

The target global carbon balance may be decided through consensus under the Paris Agreement (based on the global stock-take). The consensus approach might result in a target that is independent of NDCs because the policy can operate effectively without coordination with NDCs. Alternatively, countries might prefer to adjust their NDCs to match the target global carbon balance for the policy.

3.2 Energy Asset Exchanges

Energy asset exchanges are commercial transactions for swapping existing fossil fuel assets for new renewable energy assets of approximately equal market value. The exchanges will reduce fossil fuel production while simultaneously increasing cleaner energy production — thus breaking the cycle of fossil energy dependency.

Energy asset exchanges begin with an offer of a reward payment to the owner of a fossil fuel reserve (coal, oil, or natural gas) and connected physical capital (buildings, pipes, refineries, etc.) in exchange for the owner agreeing to a performance-based contract. The contract will require the owner to (a) leave the fossil fuels in the ground and retire the infrastructure for 100 years (rolling forward), and (b) use their carbon asset payment to build and operate new renewable energy infrastructure.

Private and state-owned energy companies will enter into these energy asset exchanges on a voluntary basis. The overarching goal of the exchanges is to accelerate the substitution of fossil energy with cleaner/renewable energy alternatives, and to minimize stranded assets and financial instability during the clean energy transition.

The energy asset exchanges will be designed and guided by policymakers to:

- protect biodiversity and stabilize carbon stores in forests (tropical, sub-tropical, temperate and boreal), peatlands, mangroves, and other ecosystems.
- protect indigenous people and vulnerable communities from the negative impacts of fossil energy extraction, processing, and transport;
- provide bankable finance, debt relief, and greater financial independence for least-developed and developing countries; and
- promote technology transfer for the construction and operation of utility-scale and small-scale renewable energy systems.

3.3 Energy Supply-Demand Balancing

Energy supply-demand balancing is a strategy for decarbonizing industries that consume a significant amount of fossil energy (e.g. electricity production, shipping, building heating, steel production). This strategy involves offering the carbon reward and related performance contracts to guide specific changes in the supply/demand for fossil energy, and the supply/demand for renewable energy — so that the resulting changes are reasonably balanced. This is to avoid unwanted energy price volatility, and to ensure that supply chains are retrofitted in a synchronized manner.

Energy supply-demand balancing begins with offering the carbon reward to dirty industries — at the required price points — so that they will convert their industrial systems to consume cleaner/renewable energy instead of fossil fuels.

Energy supply-demand balancing is completed when the anticipated increase in demand for cleaner/renewable energy (as industries decarbonize) is addressed with the substitution of fossil energy (that are no longer needed) with new sources of cleaner/renewable energy. The commercial transactions for energy producers will be managed as energy asset exchanges as described in the previous section. These exchanges will involve performance contracts that stipulate the amount and type of cleaner/renewable energy that will be needed for the industries that decarbonize.

There are five operational goals of energy supply-demand balancing, namely:

- to accelerate the rate of conventional decarbonization;
- to bootstrap renewable energy production by overcoming high development costs, network effects, and poor technology coordination;
- to stabilize energy prices;
- to promote cooperation between energy producers and consumers; and
- to establish new systems and supply-chains.

3.4 Regenerative Co-Benefits

The carbon reward policy will support regenerative co-benefits through inclusive stakeholder participation. This will be managed via web-based platforms that will be developed and maintained by stakeholders. These platforms will invite communities to help reallocate financial rewards to reflect the beneficial co-benefits and adverse impacts of projects. By utilizing transparent stakeholder surveys, the approach will provide an environmental and social safeguard, and will foster a sense of ownership and responsibility among all parties involved.

The adjustments to the rewards will be managed as a "Robin Hood" scheme. This implies that some reward payments will be taken from projects causing harm and given to projects that provide regenerative co-benefits for communities, ecosystems, and industries. The Robin Hood scheme will spur healthy competition for regenerative solutions and will promote public accountability.

3.5 Atmospheric Carbon Removal-and-Storage

Atmospheric carbon removal-and-storage, also called *carbon dioxide removal* (CDR), is a controversial technology for three reasons: (a) it is likely to be essential for limiting global warming to well below 2 to 1.5°C; (b) it is not yet supported by scalable public or private finance; and (c) without a convincing international commitment for conventional emission reductions it is unclear how policymakers can give their full support to CDR when CDR is currently viewed by many stakeholders as an excuse to continue with business-as-usual.

The carbon reward policy employs a global strategy of financing the maximum feasible rate of conventional mitigation, and simultaneously funding a minimum safe level of CDR. With this approach, the policy will:

- create a global market to develop new CDR technologies,
- provide results-oriented financing of CDR and scalability,
- chart a politically stable pathway to the Paris goal, and
- establish CDR as a public service analogous to public waste management.

4. New Financial Architecture: A Special Context

A “transformation of the international financial architecture” was requested by many Party and non-Party stakeholders in their 2022-23 submissions. Over time — when the Parties and non-Party stakeholders have had sufficient time to evaluate the carbon reward policy — the Sharm el-Sheikh dialogue may wish to steer this policy discussion towards the topic of a new financial architecture. This is because the carbon reward policy is, by design, a significant reform to the international financial system.

The carbon reward policy could be globally transformative for the following reasons:

- The policy can foster a common market-and-monetary framework for intergovernmental negotiations and a new pathway for understanding and guiding the implementation of Article 2.1c.
- The policy provides countries the flexibility to plan and implement their NDCs and IMTO exchanges according to their national context, policies, and environment.
- The policy offers a pathway for defining and realizing a New Collective Quantified Goal on Climate Finance (NCQG)² and helping to define and manage developed countries' financial commitments to other countries.
- The policy identifies a specific reform to regulatory frameworks and the mandates of central banks, emphasizing a system-wide approach to aligning finance flows with climate goals while also improving debt sustainability for climate action in developing countries.
- The policy provides new well-defined mandates for financial supervisors/regulators and central banks to provide the public finance guarantee based on the proposed central bank CQE program.
- The policy can increase flows of new, additional, and predictable climate finance via the public finance guarantee (refer CQE) with these flows primarily

² Refers to Article 9, paragraph 3, of the Paris Agreement. The carbon reward policy aims to deliver debt-free mitigation finance that is much greater — roughly 30 times greater — than the USD \$100 billion per year ambition of the Green Climate Fund.

moving from developed countries to developing countries and in ways that will be attractive to private investors.

- The policy promotes credibility with direct financial support for the private sector to make ambitious commitments and develop detailed action plans that address capital allocation, business development, and transition risks.
- The policy is structured to create innumerable public-private partnerships (PPPs) at the project-level, and somewhat similar to Just Energy Transition Partnerships (JETPs).

5. Recommendations

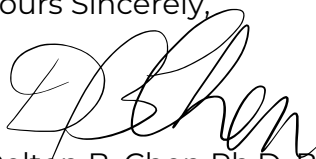
The carbon reward policy may serve as a comprehensive model for countries to collaboratively work towards the ambitious goals set forth in Article 2.1c of the Paris Agreement.

Our current recommendation is that the Sharm el-Sheikh dialogue include this submission into their 2024-2025 dialogue, including in future workshops and COP meetings, with the aim of:

- establishing a working group to appraise the carbon reward policy;
- setting an agenda to review and discuss the carbon reward policy; and
- inviting proposals for a policy proof-of-concept and field trials.

We thank you for this opportunity to provide this submission, and we look forward to discussing how we can collectively support the Sharm el-Sheikh dialogue.

Yours Sincerely,



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Supplementary Information:

[COP28 Side Events \(Videos & Slide Deck\)](#)

<https://globalcarbonreward.org/gcr-outreach-2023/cop28-uae/>

[Bank of England Presentation \(Animated Slide Deck\)](#)

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