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Aligning carbon markets with Sustainable Development Goals in the least developed countries

KEY POINTS

- Carbon trading under the Paris Agreement reshapes the policy space for developing countries, creating distinct challenges and imposing constraints that affect future development pathways.
- The least developed countries (LDCs) need to carefully consider both the potential benefits and costs of participation in carbon markets.
- Carbon market projects should be aligned with broader development goals and structural transformation in LDCs.

Aligning carbon markets with Sustainable Development Goals in the least developed countries[1]

Carbon trading under Article 6 of the Paris Agreement presents opportunities and risks for the LDCs. Rather than participating in carbon markets in an ad-hoc fashion, LDCs should build a policy framework that integrates carbon trading into existing development policy and climate policy strategies. The international community can support LDCs through enhanced capacity-building and by strengthening the integrity of carbon markets. This policy brief outlines key benefits, challenges, and policy recommendations for LDCs and development partners to mitigate risks associated with carbon trading under Article 6 and ensure that carbon markets support sustainable development in LDCs.

Introduction

Article 6 of the Paris Agreement introduces two distinct approaches to carbon trading. One approach (Article 6.2) allows countries to set up their own trading agreements through bilateral deals, while the other (Article 6.4) establishes a centralized system that will succeed the Clean Development Mechanism (CDM). Although the twenty-eighth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP28) in 2023 did not finalize specific rules for Article 6, prior COP decisions provided enough guidance for countries to begin implementing these frameworks. As a result, the Article 6 carbon market is now a reality. On 15 December 2023, the first ever internationally transferred mitigation outcome (ITMO)[2] transaction under Article 6.2 took place between Thailand and Switzerland.[3] In July 2024, 1.5 million tons of CO_2-equivalent ITMOs authorized for use under Article 6 from Malawi were auctioned on a carbon credit exchange platform.

[1] This policy brief is based on UNCTAD (2024). *The Least Developed Countries Report 2024: Crisis-resilient development finance*. United Nations publication. Sales No. E.24.II.D.22. New York and Geneva.

[2] ITMOs are units representing greenhouse gas (GHG) reductions that can be traded under Article 6 of the Paris Agreement.

[3] See https://unepccc.org/article-6-pipeline/#:~:text=On%2015%20December%202023%2C%20the,6.2%20of%20the%20Paris%20Agreement.

Article 6.2: Considerations for least developed countries

As of November 2024, 91 arrangements under Article 6.2 were in place worldwide, including 19 in 10 LDCs (table 1). In addition to these existing arrangements, numerous LDCs have expressed an interest in Article 6 cooperation in their nationally determined contributions (NDCs) or other policy documents. For instance, 29 of the 45 LDCs have stated their intention to use voluntary cooperation under that article in their NDCs.

Table 1
The least developed countries are among the early movers under Article 6.2 of the Paris Agreement
Article 6.2 arrangements with least developed county participation as of November 2024

LDC host	Buyer(s)
Bangladesh	Japan
Cambodia	Japan, Republic of Korea, Singapore
Ethiopia	Japan
Lao People's Democratic Republic	Japan, Republic of Korea, Singapore
Malawi	Switzerland
Myanmar	Japan
Nepal	Sweden
Rwanda	Kuwait, Singapore, Sweden
Senegal	Japan, Norway, Singapore, Switzerland
Zambia	Sweden

Source: UNCTAD, based on information in the Article 6 pipeline database of the UNEP Copenhagen Climate Centre (UNEP-CCC), available at: https://unepccc.org/article-6-pipeline (accessed 18 November 2024).

LDCs, like most developing economies, are host countries of these arrangements, which is to say that they are on the supply side of the Article 6 carbon market, while most buyers of ITMOs are developed countries. From the buyers' perspective, the costs and benefits are clear: they acquire ITMOs to be counted towards their NDCs and achieve emission reduction targets at a lower cost. This is because their domestic mitigation costs are higher than in host countries.

The ramifications are less straightforward from the host country's perspective, as ITMOs trigger a corresponding adjustment to the host country's emissions. Consequently, adjusted emissions reported by the host country are higher than actual emissions, while the opposite is true for the buyer country. This raises several questions for host countries.

First, mitigation projects underlying “exported” ITMOs are no longer available for the host country. It is therefore important for LDCs to differentiate in their NDCs between unconditional mitigation activities (those that host countries are committing to undertake without external support) and mitigation activities that can be included under Article 6 cooperative frameworks. This is no easy task and not generally a feature in the existing NDCs of LDCs. Therefore, it might be helpful for LDCs to develop systems to distinguish between conditional and unconditional activities at the project level to ensure a clear separation between tradable and non-tradeable emission reductions and thus safeguard their ability to reach their NDCs. Furthermore, to prepare future NDCs, LDCs will need to consider that only mitigation activities within the conditional scope of NDCs can mobilize finance through the transfer of ITMOs.

Second, where individual projects have different mitigation costs, there is a risk that buying countries will focus on cheaper projects, which could leave LDCs with the task of implementing more expensive projects to reach their own NDC targets. This risk extends across NDC periods, and LDCs need to be aware that exporting ITMOs in the current NDC period could lead to rising average abatement costs in future NDC periods. In other words, selling cheaper projects makes pursuing a policy of increasing mitigation ambition in the spirit of the Paris Agreement more expensive. This source of risk can be mitigated by ensuring that a fair share of emission reductions from Article 6.2 activities remain in LDCs. In this context, it is important that the principle of “equitable sharing of mitigation benefits”, as specified in Article 6.4 rules, modalities and procedures[4] is also upheld in bilateral arrangements under Article 6.2.

Third, there is the risk of time inconsistency of ITMO transfers since LDCs can sell ITMOs from a given mitigation project only once. As the future price path of ITMOs is highly uncertain, the question arises regarding how to time and sequence mitigation projects within and between Article 6.2 arrangements. If the value of ITMOs increases as climate policy is tightened worldwide and marginal abatement costs in developed countries increase, it might be more beneficial for host countries to wait rather than sign off on ITMO transfers on less favourable terms.

Fourth, transaction costs need to be assessed for LDCs that engage in Article 6.2 arrangements with multiple bilateral partners. As each bilateral agreement is negotiated individually and has its own terms and conditions, the administrative burden associated with supervision and coordination increases with the number of bilateral partners. In this regard, developing national systems in LDCs and requiring bilateral partners to adapt to them could help limit transaction costs and administrative burdens of Article 6.2 arrangements.

[4] UNFCCC (2021). Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement. Decision 3/CMA.3. United Nations Framework Convention on Climate Change. Bonn, Germany.

Finally, another source of risk for host countries is that buyers of ITMOs are generally developed countries (i.e., those that are also providers of climate finance). From the perspective of a buyer country, the possibility of receiving ITMOs in return for investments in mitigation activities could create an incentive to redirect climate finance flows towards Article 6.2 activities. There is some evidence that, in the past, there has been a relabelling of official development assistance funds towards climate finance.[5] In this context, it is important to safeguard the additionality of climate finance and ensure no rechannelling of scarce climate finance towards Article 6.2 arrangements. Otherwise, it could result in further geographic concentration and a stronger focus on mitigation. However, adaptation finance is a greater priority for LDCs as they are among the most climate-vulnerable countries in the world.

Accounting for the specificities of least developed countries in the Article 6.4 mechanism

LDCs face market access barriers in international carbon markets due to high transaction costs, stringent compliance requirements and complex procedural frameworks that often demand advanced technical and administrative capacities. To improve access conditions for LDCs, it is therefore crucial to account for the specificities of these countries in the spirit of common but differentiated responsibilities.

Article 6.4 rules, modalities and procedures state that suppressed demand should be recognized by methodologies under the mechanism. The concept of suppressed demand was introduced under the CDM to enable the participation of countries with low emissions levels, such as most LDCs. Suppressed demand exists, for example, in areas that are not connected to a power grid and where emissions from electricity use are low or zero. In such areas, deploying renewable energy solutions, such as renewable mini-grids, might not reduce emissions compared to historical levels. However, accounting for suppressed demand could increase the volume of creditable emission reductions under Article 6.4, particularly relevant for many LDCs, where the lack of access to energy for rural populations is alarmingly prevalent. Suppressed demand could also play a role in new grid-connected renewable energy plants, leading to higher electricity consumption due to income and price effects. Examples such as four grid-connected solar photovoltaic power plants in Senegal show that carbon markets can in practice contribute to financing renewable energy projects in LDCs.

[5] Miller M, Roger L, Cao Y and Prizzon A (2023). Where has the money come from to finance rising climate ambition? ODI Emerging Analysis. Overseas Development Institute. London.

Rules relating to additionality[6] are another relevant issue for LDCs. According to Article 6.4 rules, modalities and procedures, the only activities eligible for crediting are those that exceed what is mandated by national policies or regulations. In this context, LDCs need to be aware that activities included under their unconditional NDC targets might not be considered additional, as they have already been committed to, and might, therefore, not be eligible for carbon crediting. Article 6.4 rules, modalities and procedures require a "robust assessment that shows the activity would not have occurred in the absence of the incentives from the mechanism." However, draft recommendations by the Supervisory Body of the Article 6.4 mechanism state that "simplified approaches for demonstration of additionality for least developed countries or small island developing States will be developed by the Supervisory Body when a request is made by a least developed country or small island developing State."[7] In this context, it is important that such simplified approaches are made available quickly to facilitate project planning and implementation in LDCs. Furthermore, using positive lists and automatic additionality (as was the case under the CDM), could help lower barriers by limiting transaction costs and enhancing predictability for project developers. Under the latest CDM positive list, for instance, renewable-energy-based rural electrification activities by grid extension were automatically considered additional in LDCs.

Policy recommendations

Develop a proactive and strategic stance to carbon market participation. LDCs should build a domestic carbon market policy framework with clear objectives and priorities informed by their national development goals. Such a policy framework needs to include domestic regulations for carbon project operations and benefit sharing, including the share of emissions reductions that remain for the host country's own use.

Ensure alignment between carbon market engagement and development goals. Carbon market projects should be aligned with broader development goals, such as structural transformation, and used in complementary ways to other policy tools, including industrial, financial, and fiscal policies.

Carefully balance opportunities and trade-offs. LDCs need to carefully consider both the potential benefits and costs of participation in carbon markets. Opportunities include mobilizing additional development finance from appropriately designed carbon projects, which achieve positive sustainable development impacts. Challenges involve long-term constraints on policy space, uncertainty about future financial flows, and carbon market instability.

Operationalize the principle of common but differentiated responsibilities. Rules governing Article 6 of the Paris Agreement should recognize the specificities of LDCs by simplifying procedures and minimizing transaction costs and administrative burdens for these countries.

[6] Additionality refers to the requirement that a project must result in GHG emission reductions that are additional to what would have occurred in the absence of the project. This concept ensures that the emission reductions are beyond any reductions that would happen under a business-as-usual scenario.

[7] UNFCCC (2023). Recommendation: Requirements for the development and assessment of Article 6.4 mechanism methodologies. No. A6.4-SB009-A01. Berlin.

Ensure additionality of climate finance. It is critical that financial resources mobilized through carbon markets are additional to existing climate finance commitments. This distinction helps to ensure accountability for financial pledges made by development partners and mitigates the risk of climate finance flows to LDCs being tilted towards mitigation while adaptation is a greater priority for these countries.

Enhance capacity-building for LDCs. Support LDCs in building the necessary human resources, skills, laws, regulations, and institutions required for effective and beneficial participation in carbon markets.

Strengthening trust in and integrity of carbon markets. International development partners can support LDCs by adopting and implementing the United Nations Principles for Carbon Markets with Integrity and Credibility, which can enhance transparency, credibility, and trust in carbon markets.

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