The least developed countries report 2024

Chapter V

Policy actions and conclusions





Carbon markets have so far failed to deliver as sources of meaningful additional finance to help LDCs in their efforts to combat climate change and move closer to attaining the Sustainable Development Goals. To be able to leverage carbon markets to progress towards their development goals, LDCs need to develop a proactive stance that defines the terms of their engagement with carbon markets by making this just one instrument in their policy toolbox for achieving green structural transformation of their economies. LDCs need enhanced support from their development partners, in line with the principle of common but differentiated responsibilities and respective capabilities. This entails, first, designing multilateral, regional and domestic rules and frameworks for carbon markets that take into account the specific needs of and conditions in LDCs. Second, LDCs need to receive capacity-building support that not only equips them with the technical knowledge of the workings of carbon markets, but also empowers their policymakers to leverage carbon markets as part of their broader sustainable development strategies, as decided and formulated by LDCs themselves.

A. Least developed countries and carbon markets: The need to be strategically proactive

Considering the potential long-term benefits of participation in carbon markets for sustainable development of LDCs, including boosting their prospects for green structural transformation, it is imperative for these countries to adopt a proactive stance. Such a stance needs to focus on the extent to which they choose to actively engage in carbon markets, and the objectives and modalities of their participation.

In view of the modest performance of carbon markets to date, and the numerous market risks and associated long-term implications for sustainable LDC development policies, these countries are advised to adopt a cautionary approach when considering the potential of carbon markets to contribute to their structural transformation, and when making projections of future financial inflows from those markets. LDC policymakers need to weigh the opportunities and pitfalls of engaging with carbon markets, as well as the trade-offs involved, as discussed in this chapter.

1. Carbon markets: Balancing potential gains and significant risks

The potential financial benefits of participating in well-designed and wellgoverned carbon credit markets offer a significant incentive for LDCs to host carbon projects. Given the prospects of an increased demand for internationally transferred mitigation outcomes and high-integrity carbon credits, selling LDCs are advised to adopt a cautionary approach when considering the potential of carbon markets to contribute to their structural transformation carbon credits can generate significant revenue for project owners, which may be public entities. That revenue can then be redistributed to various actors. An equitable redistribution of such benefits, including among local communities, Indigenous peoples, public authorities and the private sector, should have, not only a positive local impact, but also support the country's overall development. This is how ideally the proceeds of carbon projects should be used, but it is far different from what typically takes place.

Carbon markets can have numerous positive sustainable development impacts depending on how carbon projects are implemented

Excessive and unrealistic expectations of

financial benefits could induce LDC Governments to enter into contracts with unfavourable terms Apart from the direct financial proceeds from the sale of carbon credits and the way in which they are distributed domestically among different social segments, carbon markets can have numerous positive sustainable development impacts (sometimes called co-benefits) depending on how carbon projects are implemented. Beyond greenhouse gas (GHG) mitigation outcomes, many projects emphasize their contributions to sustainable development, such as health benefits, gender empowerment and education. These outcomes can improve people's living standards and support national sustainable development. However, the benefits in both dimensions have been minimal so far, as discussed in chapters II and III. Looking to the future, the realization of the potential benefits depends on a series of actions, policies and programmes that should be implemented by both LDCs themselves and their development partners (discussed below and in section B).

At the same time, LDCs and their development partners need to be aware that the future contribution of carbon markets to structural transformation and sustainable development in LDCs is subject to several risks, discussed below.

First, some risks from participation in carbon markets derive from the workings of the

markets themselves. This refers to the risks related to regulatory changes and other demand-side shocks in major jurisdictions that generate demand for carbon credits, which will typically evolve according to the domestic priorities and political and policy developments internal to those jurisdictions. In the case of larger jurisdictions, these developments will have a major impact on the demand for internationally transferred mitigation outcomes. Additionally, on a global scale, carbon markets could encounter the risk of fallacy of composition, whereby a large number of countries mainly developing - strive to sell carbon credits at the same time, yet worldwide demand does not expand at the same pace.¹ Such an excess supply of carbon markets would further depress carbon prices, or at least keep them from rising over the long term. As a result, investors would no longer be attracted to these markets. For LDCs, it would mean that they would fail to realize even the modest annual market value of land-based carbon credits, projected to be \$6 billion in 2030, when considering a scenario where carbon prices rise to \$100 per ton of CO₂-equivalent (chapter II).

Second, excessive and unrealistic expectations of financial benefits could induce LDC Governments to enter into contracts with unfavourable terms, such as requiring them to relinquish control of large areas of land or sell their "low-hanging fruit" of climate action, leaving them burdened with addressing sources of emissions that are the most difficult to reduce. This risk would compromise their future policy space, not only in the environmental field, but also in terms of broader development policies. Moreover, it would extend across periods covered by different nationally determined contributions. LDCs need to be aware that exporting internationally transferred mitigation outcomes in the current nationally determined contributions period could

¹ This situation would be analogous to that which arises when a significant number of developing-country exporters expand their exports of manufactures simultaneously, so that the rate of supply growth outpaces the rate of demand expansion. This depresses international prices of manufactures, causing a deterioration of these countries' terms of trade – a phenomenon referred to as fallacy of composition in development strategies (Mayer, 2002).

lead to rising average abatement costs in future nationally determined contributions periods. In other words, selling low-hanging fruit makes the future pursuit of a policy of increasing mitigation ambition – in the spirit of the Paris Agreement – more expensive.

This risk can be mitigated by ensuring that a fair share of the benefits from emission reductions, as stipulated in Article 6.2 arrangements, remain in LDCs. In this context, it is important that the principle of "equitable sharing of mitigation benefits between the participating Parties," as specified in the rules, modalities and procedures of Article 6.4 (UNFCCC, 2022), is also upheld in bilateral arrangements under Article 6.2.

Third, a pure focus on generating large volumes of credits to benefit financially from market participation can lead to reducing climate action at a global level, as large polluters will tend to rely on lowquality carbon credits to meet emission reduction targets on paper without actually changing their business models. This would exacerbate climate change-related damage, which disproportionately affects LDCs.

Fourth, unregulated markets are fertile ground for practices subject to poor governance and surveillance, given their current level of opacity. Ideally, LDC engagement in these mechanisms should be conditional on clear safeguards and concrete measures to increase market transparency in order to enable clear tracking of benefits and prevent the sale of carbon credits that enrich profiteers.

Beyond the workings of global, regional and local carbon markets themselves, participation in these markets requires that host countries build and operate institutions, such as commissions, as well as laws, measurement mechanisms and carbon registries, as analysed in chapter IV. They also need to develop corresponding skills and capabilities, and bear the costs of creating and maintaining the necessary institutions and capacities. However, such costs may represent critical constraints on LDC participation in carbon markets.

The above considerations indicate the need for LDCs to develop proactive positioning vis-à-vis carbon markets. They should determine whether their participation in those markets is in line with their development priorities after considering the trade-offs involved, rather than being passive approvers of projects and agreements initiated by foreign agents (whether public or private). In other words, LDCs need to undertake a careful analysis of the potential benefits and pitfalls involved in carbon market participation before deciding whether and under what conditions to participate.

Adopting a proactive stance on carbon markets means that LDCs should regard carbon projects as but one policy tool, among others, to be mobilized by their policymakers as part of their strategies for sustainable development. Carbon projects can only be considered effective if they make a contribution to the green structural transformation of LDCs. To this end, developing the appropriate institutions and capabilities would enable them to be in control of the development of carbon projects in their countries on their own terms. This is also a way of ensuring against carbon projects evolving under an extractivist model (box V.1).

Carbon projects can only be considered effective if they make a contribution to the green structural transformation of LDCs

The extractivist drift

Wealthier stakeholders may initiate projects and agreements aimed mainly at securing access to carbon credits while paying little attention to the economic, social (including gender aspects) and environmental impacts on local communities and, more broadly, on host countries. These other purported goals of carbon projects imply some form of equitable sharing of the financial proceeds from projects, as well as providing broader economic and social co-benefits.

The development of carbon markets has given rise to a new commodity: carbon credits. However, the production of this commodity and its trading risks following a pattern similar to that of natural resource extraction in many developing countries. Under the extractivist model, natural resources (e.g. energy commodities, minerals and metals, forest products and aquatic resources) are extracted in developing countries for trading and processing abroad. This limits the potential for upgrading to more value added activities in the originating area, which consequently remains impoverished (Chagnon et al., 2022).

It could also be argued that carbon markets have become as, if not more, important than critical energy transition minerals in terms of the new "gold rush" for carbon projects and certified emission reduction in LDCs.

The risk that carbon markets lead to an extractivist economic model is strong in relation to carbon projects that involve nature-based solutions. Such solutions generally involve restrictions on access to natural resources for the duration of projects, which tends to be long. So far, foreign private actors in particular have sought to purchase national assets in many developing countries, including LDCs, often in the form of land for carbon crediting purposes, rather than providing "no strings attached" climate finance. This has pushed many countries to promote solutions such as poorly regulated carbon credit mechanisms, which might not directly serve their own interests. The risk is that, instead of setting up a mechanism whereby wealthy actors support actions on top of their own decarbonization efforts, these actors are motivated to purchase carbon credits as a way of meeting both their decarbonization goals (or to substantiate other forms of voluntary claims) and global climate finance targets, thereby blurring the difference between climate finance and carbon finance.

An aggravating risk of the possible extractivist drift of carbon markets is that the geographical areas covered by carbon market projects involving nature-based solutions are often much larger than those of a typical mine or oilfield. In some cases, given the size of the land area involved in carbon projects, they have been likened to land grabbing. This phenomenon attracted much attention in the 2010s (UNCTAD, 2013; Borras et al., 2011). When large land sales or leases to foreign investors have been associated with environmental goals, this has been termed "green grabbing" (Batterbury and Ndi, 2018). The extent of land area set aside for carbon project development can be especially large in forestry projects. Consequently, the possible adverse economic, social and environmental impacts of nature-based carbon market projects can be much greater than those of typical natural resource extraction projects. Another possibly contentious issue relating to nature-based projects is that of land tenure, as a country often has in place conflicting systems of land tenure. This is a key issue for both mitigation and adaptation to climate change and can influence the success of carbon projects.

Projects involving nature-based solutions in the forestry sector need to avoid exploitation of forest resources based on extractivist logic. Rather, forests need to be managed according to the principles of sustainable forestry, which includes the economic, social and environmental dimensions of sustainability (FAO, 2005). Achieving sustainability in forest management can be accelerated by the adoption of innovation, whether technological (e.g. open access to remote-sensing data and the facilitated use of cloud computing), policy-related (e.g. the promotion of multi-stakeholder partnerships and cross-sectoral approaches in land-use policies and planning) or financial (e.g. innovations to enhance the value of standing forests) (FAO, 2024). Thereby, sustainable forest management can contribute to the structural transformation of LDC economies (FAO, 2022).

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Source: UNCTAD.

2. How to integrate carbon market participation into national development strategies

LDCs that participate in carbon markets are advised to subsume this engagement under their broader long-term development objectives and policy goals. This means LDC policymakers' considering carbon market participation not only as a tool of climate policy, but rather as an instrument within their broader strategies for sustainable development. In other words, carbon market participation is best viewed in terms of how it fits into national development plans, nationally determined contributions and other long-term policies and policy documents. By adopting this perspective and acting accordingly, carbon market engagement can provide a contribution to sustainable development and structural transformation of LDCs.

The perspective mentioned in the previous paragraph applies to all forms of engagement with carbon markets. However, the voluntary carbon market provides an additional incentive for this type of alignment of carbon projects with the Sustainable Development Goals, since the associated carbon credits become sought after by buyers and so fetch a higher price. It is not difficult for carbon market project developers to claim alignment with the Goals, given the wide array of themes and areas covered by the Goals. However, rather than simply seeking a generic alignment of carbon projects with the Goals, LDC policymakers are advised to aim at ensuring that the carbon projects contribute to the attainment of structural transformation in their countries.

The Least Developed Countries Report series has long argued that, for LDCs to reach their development goals (e.g. the Sustainable Development Goals, the targets of the Doha Programme of Action and the national objectives enshrined in their national development plans), a green structural transformation of their economies is necessary (e.g. UNCTAD, 2015, 2021). Therefore, LDCs hosting carbon projects should channel their resources to sectors and activities that directly contribute to this type of structural transformation (e.g. renewable energy). They should also encourage the design of projects in a way that contributes to the goal of structural transformation (e.g. sustainable forestry, in the case of forestry projects, since it combines forest conservation with the sustainable development of naturalresource-based economic activities).

Carbon projects tend to have more of a direct impact at the local level (apart from their contribution to global mitigation). Therefore, their management needs to be part of environmental policy and complementary to broader policies, such as industrial, science, technology and innovation policies, as well as financial and fiscal policies. Ideally, these different policies should be coherent and mutually supportive. In this context, carbon markets should not only be one of a broader toolbox that LDC policymakers have at their disposal, but should also reflect coherence and synergies among them, so that they are mutually supportive.

Steering carbon projects in a way that contributes to structural transformation requires LDCs to adopt proactive positioning vis-à-vis carbon markets, take the lead in project selection and negotiations, and be actively involved in their content, execution and monitoring. This in turn requires that LDCs be equipped with the institutions and institutional capacity necessary to participate in carbon markets, and play a leading role in developing their own related projects in their countries.

National development plans and nationally determined contributions should guide the conception of projects considered for authorization by Governments of developed countries. Ideally, projects should meet a threshold of investment, operational capital, positive sustainable development impacts and higher standards for the credits. Projects should also reflect the ambition set in nationally determined contributions, Carbon market participation is best viewed in terms of how it fits into national development plans and nationally determined contributions

Steering carbon projects in a way that contributes to structural transformation requires LDCs to adopt proactive positioning visà-vis carbon markets, and take the lead in project selection and negotiations particularly those consistent with longterm national development plans.

LDCs should demarcate unconditional nationally determined contributions activities from mitigation activities that can be included under Article 6 cooperative frameworks. This also means that plans relating to Article 6 participation need to be considered when the next editions of nationally determined contributions are drafted, as unconditional mitigation activities might not pass the additionality test under Article 6.4, which would exclude them from generating carbon credits. In essence, LDCs need to take a holistic view that encompasses domestic climate policy, strategies for engagement on international carbon markets and the opportunity cost of future options.

3. Strengthening domestic institutions to maximize developmental gains from carbon projects

Beyond the institutions required by international treaty obligations, national institutions have a critical role to play in ensuring that carbon domestically bring developmental gains to their countries

Another possible way in which carbon projects may contribute to structural transformation in LDCs is through their potential impact on institutional development in these countries. An upgrading of institutional capacities is an essential component of structural transformation, and can have positive feedback effects on other aspects of economic and social development (UNCTAD, 2006, 2009). So far, however, LDC participation in carbon projects has not led to any significant institutional capacity-building. This is primarily because most LDCs have been involved in only a few carbon projects, and 13 of them do not have any experience with such projects, as shown in chapter III. Moreover, in most cases, the initiative, design, implementation and management of projects have been undertaken mainly by foreign private project developers, while Governments have played a minor role. Rather than developing State capacities to perform the governance functions of regulating, checking and enforcing

agreements or carbon market rules, these functions have been outsourced to private actors, most of which are foreign. Therefore, learning by doing, the accumulation of experience and capacity-building, all of which could lead to institutional development, have been largely absent.

LDCs that from now on decide to host carbon projects in their territory and/ or develop their own carbon markets will need to establish an institutional framework that includes commissions, laws, measurement mechanisms and carbon registries. Not only are institutions necessary for the operation of any market, as analysed in chapter IV, but, more specifically, Article 6 of the Paris Agreement requires countries engaging in both voluntary markets and intergovernmental carbon agreements to establish a minimal set of institutional arrangements. The UNFCCC imposes regulatory, technical, governance and administrative compliance requirements, as also noted in chapter IV.

Beyond the institutions required by international treaty obligations, national institutions have a critical role to play in ensuring that carbon projects established domestically bring developmental gains to their countries. Institutional development and capacities, and the associated skills, contribute to LDC success in capturing a significant share of the revenues from carbon credit sales and ensuring that host countries reap positive sustainable development impacts from carbon markets. Such institutional development strengthens the negotiating position of host countries vis-à-vis other stakeholders, such as project developers. In its absence, carbon projects will be driven by the interests of project developers and may not align with national development goals, or their design risks being based on an extractivist model (box V.1).

In building the institutions to better participate in carbon markets, LDCs and other developing-country host parties could consider creating synergies by collectively setting the terms of host-country

engagement, including partial authorization, split liability for measurement, reporting and verification, minimum mitigation sharing (i.e. a portion of mitigation is not authorized, but can still be counted by the host party for their nationally determined contributions) and remediation of reversals between buyers and hosts. This might strengthen LDC negotiating positions in international markets, giving them a firmer common basis for negotiating terms with buyer countries and entities, rather than competing with one another in a race-tothe-bottom approach to attract investments at the expense of their individual interests. Such collective action could be undertaken at the subregional or regional level.

Through such a common approach, selling countries could set a common minimum price for credits, differentiated by activity type, across all countries. Going one step further, countries could operationalize a voluntary pool of credits to which they contribute with a minimum sale price. Pooling would reduce administrative and financial costs for the participating countries, while also helping to increase transparency and reduce competition among them. This would reduce their administrative and financial costs through centralization, which could also increase transparency and minimize competition.

To develop the institutional framework required for proactively steering carbon projects to make the best use of carbon markets in support of their green structural transformation, LDCs need technical expertise for drafting legislation and building the requisite institutions. Additionally, they need to mobilize the necessary resources (financial or otherwise) for establishing and operationalizing those institutions. The support that the international community can provide to LDCs for them to acquire the skills and resources necessary for their institutional development is discussed in section B below.

4. Domestic legislation can play a critical role

The adoption of relevant national legislation and regulations is one critical component of institutional development to ensure that the implementation of carbon projects contributes to the LDC host country's sustainable development and structural transformation. To reach this goal, such laws and regulations need to include provisions on who can implement carbon projects within the national territory, and they need to define benefitsharing arrangements to ensure those projects bring developmental benefits.

The benefit-sharing arrangements should specify how revenues from credit sales are to be distributed, and particularly how monetary and non-monetary benefits will be distributed among stakeholders in or affected by a project. Therefore, a robust benefit-sharing arrangement is an important element to ensure that any project has a minimum social negative impact. In particular, its implementation should ideally safeguard the interests of Indigenous peoples and local communities, making sure that they benefit from voluntary carbon market business transactions that take place in their territories. The evolution of the domestic legislation of Zambia analysed in chapter IV provides an interesting example of how domestic institutions are evolving in some LDCs to respond to the developmental concerns of LDC host countries.

Governments need to adopt measures to ensure that carbon projects are genuinely additional and that their implementation is not simply for compliance purposes. To this end, regulations can be crafted so that projects are coherent with government programmes and priorities, and the positive sustainable development impacts accruing from those projects are in line with national priorities.

National legislation should also consider establishing a grievance mechanism (box V. 2).

Selling countries could set a common minimum price for credits, differentiated by activity type

A robust benefit-sharing arrangement is an important element to ensure that any project has a minimum social negative impact



Box V.2 Grievance mechanisms

Grievance mechanisms are an essential component of the carbon market architecture. This is because they are the main avenue for people negatively affected by carbon credit projects to seek remediation. Most voluntary carbon market standards have such a mechanism in place. However, literature suggests that most grievance mechanisms in voluntary carbon market standards have serious shortcomings, and that there was even one instance of a standard with no grievance mechanism in place (Dalfiume and Michaelowa, 2023). A recent review of these processes found improvements to these mechanisms, but also that many of the initial shortcomings persist (Dalfiume et al., 2024). To construct an effective grievance mechanism, certain basic criteria need to be met: accessibility, transparency, predictability, independence, adequacy and safeguards.

The later review found that the best example of a grievance mechanism that meets these criteria is found outside the carbon market, namely the United Nations Green Climate Fund's Independent Redress Mechanism. On the carbon market, the Gold Standard was found to have the best grievance mechanism. Climate Action Reserve, Verra, American Carbon Registry and ART TREES have grievance mechanisms with a good level of detail, but also some significant shortcomings (Dalfiume et al., 2024).

The shortcomings include limited accessibility – due, for example, to the exclusion of local languages – and limited independence, such as when the decision-makers in a grievance have a clear conflict of interest, for example when members of the standard's board of directors also mediate grievances.

There is wide variation in the quality of the current grievance mechanisms available under different projects (Dalfiume and Michaelowa, 2023; Dalfiume et al., 2024). The implications of the shortcomings under some standards are manifold. Primarily, they make it difficult for people impacted by carbon-credit-generating activities to gain redress, or the redress may be insufficient to compensate for the harm. This in turn can influence the position of the local communities affected by carbon market activities vis-à-vis the project itself, the project developers and the carbon markets more generally. While harm must be avoided from the outset of a project, some unforeseen negative consequences may arise, and if there is no effective way to address them, communities are left feeling disadvantaged by such projects.

Avoiding and remedying harm is especially important for the LDCs. In these countries, access to official legal recourse may be more limited than in other countries due to poverty among affected communities or individuals, or to weak institutional capacity to provide for the appropriate recourse and remedy. To promote a positive attitude towards carbon market projects from local communities, it is therefore essential that instruments to limit the damage that carbon market activities can cause are available, and that a grievance mechanism is in place.

Source: UNCTAD.

B. Enhancing and realigning international support to least developed countries: A road map for development-oriented carbon markets

1. Carbon finance, climate finance and development finance: Clarifying their respective roles

The launch and growth of carbon markets have given rise to some confusion between carbon finance and climate finance and therefore a distinction needs to be made between them. The former refers to the revenue realized from projects through the sale of carbon credits earned,² whereas the latter refers to the funds required for addressing climate change. Climate finance can involve local, national or transnational financing, which may be drawn from public, private and/or alternative sources of financing. It includes, in particular, the commitment by developed countries, at the fifteenth session of the Conference of the Parties to the UNFCCC in 2009, to mobilize \$100 billion a year by 2020 for climate action in developing countries. This target was later extended to 2025. It is to be followed by the updated new collective quantified goal on climate finance that was still being debated in multilateral climate negotiations under the aegis of the UNFCCC at the time of writing this report.

Donor countries have tended increasingly to try and share the burden of providing climate finance with their private sector by means of the latter's acquisition of carbon credits. Correspondingly, some participants in climate negotiations have argued that carbon finance should be part of climate finance. However, this raises the risk that the purchase of carbon credits will weaken the commitment of donor countries to deliver and increase their climate finance contributions to developing countries, including LDCs. In so doing, it contradicts the original intentions under which carbon finance and climate finance were conceived. It is important to avoid confusion, by making a clear distinction between carbon finance and climate finance, as further argued below.³

If carbon credits are used to channel finance to projects without counting the underlying reductions towards a mitigation goal, there could be ways of accounting for this as part of climate finance goals. Careful monitoring is needed to ensure that such "carbon finance" provided by the private sector is additional to, and does not replace, any commitments relating to public climate finance contributions. Therefore, whatever future developments occur in the carbon markets, they should not Carbon finance refers to the revenue realized from projects through the sale of carbon credits earned, whereas climate finance refers to the funds required for addressing climate change

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² As mentioned in chapter II and in the present chapter, a separate issue concerns the sharing of the financial benefits of the revenues from carbon projects among the different actors involved in the projects (e.g. host State, local communities, intermediaries, brokers, private project developers and non-governmental organizations). Therefore, the market value of carbon credits is much higher than what domestic agents receive from the sale of carbon credits.

³ This is also the position, for instance, of the West Africa Alliance on Carbon Markets and Climate Finance (Wallengren et al., 2024).

detract from the international community's responsibility to mobilize the climate finance required to address climate change.

Besides the distinction between carbon finance and climate finance, as noted above, it is important to distinguish between climate finance and development finance. As stipulated by the UNFCCC, climate finance should consist of "new and additional financial resources" (United Nations, 1992, Article 4.3) and should therefore be different from development finance. By the same token, there should be no confusion between carbon finance and development finance. The development of carbon markets, whatever its future trajectory, does not exempt the international community from the need to overcome the glaring shortcomings of the international financial system in mobilizing and channelling the finance required by LDCs to reach their development goals (including the Sustainable Development Goals) (UNCTAD, 2023).

Another trend that has developed in international development finance is that public funds are being used to provide incentives for private investment in developing countries, including LDCs, in the context of blended finance operations (UNCTAD, 2019). Similarly, public funds are being deployed in carbon projects as incentives for private sector involvement in those projects. This represents the diversion of official development assistance (ODA) funds to uses that are different from those for which they were initially intended (i.e. traditional development aid), which remains underfunded. Thus, no matter how carbon markets develop in the future, they should not absolve the international community of its ODA commitments and pledges, including the target of deploying 0.15-0.20 per cent of donor country gross national income for ODA to LDCs.

2. Carbon market integrity needs to be strengthened

Accusations of a lack of environmental integrity of carbon projects and of greenwashing have been a major obstacle to the development of carbon markets, and have tended to dampen demand for carbon credits, as shown in chapter I. In response, various initiatives have been launched, including the Integrity Council for the Voluntary Carbon Market, which aims to set thresholds to determine which credits are deemed to be of "high integrity," or the Voluntary Carbon Markets Integrity Initiative, which focuses on the demand side by developing a claims code to guide and regulate companies making voluntary claims on the back of purchasing carbon credits.

In 2024, the United Nations was scheduled to launch its Principles for Carbon Markets with Integrity and Credibility. An initiative of the Secretary-General, they were developed with the participation of several agencies of the United Nations system, including UNCTAD. The principles aim to strengthen the trust, integrity, transparency and credibility of carbon markets. Concerning the supply side, the principles include transparency, additionality, permanence of claimed reduction or removal units, social and environmental safeguards (including gender issues and human rights) and equitable distribution of benefits. On the supply side, the principles include accurate offset claims, transparency, etc. They also encompass the market itself, aiming at market integrity and credibility. The United Nations is expected to play a more substantial role in convening and facilitating coordination efforts among the various stakeholders (such as crediting mechanisms' governing bodies, multilateral institutions, Governments, standard setters of voluntary principles, business and financial institutions, and the broader carbon market ecosystem) and in promoting a unified shift to high-integrity and highcredibility carbon markets. It is expected that

Climate finance should be different from development finance, according to UNFCCC the rollout of the principles, and their gradual adoption by market participants worldwide, will improve the credibility of carbon markets and make them more development friendly.

3. Carbon markets and common but differentiated responsibilities

LDCs are contributing to global climate change mitigation, even though they are minor emitters - both historically and currently - and lag behind in economic and social development. LDC commitments are expressed by their continuous and active participation in multilateral climate negotiations and their formulation of ambitious nationally determined contributions. It has been argued that these countries should engage with carbon markets despite being only marginally responsible for climate change (Africa Carbon Markets Initiative, 2024; Keane et al., 2021). Such engagement was supposed to be rewarded by financial inflows, positive sustainable development impacts and benefit-sharing in carbon projects, all of which were expected to contribute positively to LDC development (chapter I). However, as this report's analysis has shown, the expected positive rewards from their participation in carbon markets have either not materialized or, at best, been limited and insufficient. Moreover, the specific conditions and needs of LDCs have often not been adequately taken into account when devising international carbon market mechanisms and instruments. This suggests that the principle of common but differentiated responsibilities and respective capabilities enshrined in the UNFCCC and the Paris Agreement has not been adequately implemented. Expectations concerning the benefits that LDCs can derive from engaging with carbon markets need to be toned down. LDC policymakers are advised to give careful consideration to the consequences of hosting carbon markets on their countries' future climate

policy, including the possibility of being left with the more challenging forms of mitigation, as mentioned above.

The analyses undertaken in this report also show that a large share of the commitments contained in the nationally determined contributions of the LDCs are conditional upon receiving support from their development partners for implementation of their climate action plans and projects. It is in the interest of the international community that a larger share of these commitments become unconditional over successive generations of nationally determined contributions, as this would provide greater certainty to the future trajectory of climate policy at a global scale. Therefore, development partners need to provide substantially greater support to LDCs so that these countries can achieve structural transformation of their economies, while at the same time contributing to climate change mitigation.

Making the structural transformation of LDCs compatible with their contributions to climate change mitigation requires the international community to allow these countries to use a significant proportion of the remaining carbon budget compatible with the Paris Agreement objectives (i.e. to keep long-term global average surface temperature at well below 2°C above preindustrial levels and pursue efforts to limit it to 1.5°C by the end of this century). LDCs emitted just 48 gigatons of CO₂-equivalent between 1,750 and 2019, compared with 1,502 gigatons of CO2-equivalent emitted by developed countries (UNCTAD, 2022). The indicative remaining carbon budget compatible with a temperature rise of +1.5°C (+2°C) is approximately 300 (900) gigatons of CO₂-equivalent, according to the Intergovernmental Panel on Climate Change (IPCC, 2021). However, the structural transformation required for LDCs to reach their development goals will, in principle, entail higher emissions by this country group in the future. They should therefore be allowed to use a significant proportion of the remaining carbon budget,

Expectations concerning the benefits that LDCs can derive from engaging with carbon markets need to be toned down in line with the principle of common but differentiated responsibilities and respective capabilities enshrined in the UNFCCC (United Nations, 1992, Preamble, Article 3.1, Article 4.1) and in the Paris Agreement (United Nations, 2015, Preamble, Article 2.2, Article 4.3, Article 4.19).

The principle of common but differentiated responsibilities and respective capabilities can be implemented through the provision of special and differentiated treatment of LDCs in the rules and institutions that steer carbon markets In the case of carbon markets, the principle of common but differentiated responsibilities and respective capabilities can be implemented through the provision of special and differentiated treatment of LDCs in the rules and institutions that steer these markets. This would be a means of allowing LDCs to pursue their structural transformation while upholding the environmental obligations undertaken internationally in contributing to climate change mitigation. This requires the international community to provide LDCs with the frameworks and rules that allow them to pursue these paths in parallel, in the spirit of climate justice. Subsection B.4 below provides some examples of how this can be achieved.

4. Addressing equity gaps in Article 6 participation

Negotiations on the rules and modalities of implementation of Article 6 will play a critical role in shaping carbon markets in the future and will therefore have longterm consequences. Therefore, they are particularly important, as is the challenge of reaching consensus on a number of issues. This section discusses some critical issues from the point of view of LDCs, which negotiators should consider in terms of making carbon markets more effective tools in the pursuit by LDCs of sustainable development and structural transformation.

It is in the interest of LDCs to support ambitious outcomes of Article 6.2, which can have positive knock-on effects. These countries would benefit especially from: (a) better definitions of the scope of cooperative approaches; (b) a common authorization statement; (c) clear sequencing for the authorization and trade of internationally transferred mitigation outcomes; and (d) tighter confidentiality rules. Together, these provisions would contribute to levelling the playing field between all Parties to the Paris Agreement and deliver greater predictability and transparency. These effects, in turn, would strengthen the position of LDCs when negotiating terms of cooperative approaches should they wish to participate in Article 6.

It is important for any LDC that may be already entering into negotiations on a cooperative approach with a prospective buyer country to have clear requirements that will safeguard that country's national interests, in order to avoid the shortcomings of past project implementation highlighted in chapters II and III. This can be achieved in different ways. First, it could be beneficial to include mitigation sharing terms, whereby perhaps 50 per cent or more of any mitigation from the cooperative approach is not authorized (and hence not claimed as part of internationally transferred mitigation outcomes) but can still count towards the host country's nationally determined contribution.

Second, host countries could also agree to authorize only mitigation that involves mitigation that is very expensive or technically difficult for the host country to undertake, in comparison with less expensive mitigation. This would avoid a situation whereby the LDCs need to finance costly abatement on their own in the future in order to reach their nationally determined contributions, since they will have already sold off inexpensive abatement to other Parties.

Third, host countries could also develop a fee structure, including applying corresponding adjustments and authorizing internationally transferred mitigation outcomes, since these entail administrative and opportunity costs, given that the host country will no longer be able to count the mitigation outcomes as part of its nationally determined contributions.

Fourth, a host country could require a buyer country to provide financing to

conduct measurement, reporting and verification for mitigation over the long term and to remediate all or a particular share of future reversals (particularly important for nature-based mitigation) that might occur years or decades later. In the absence of such a requirement, the host country would risk incurring unaccounted heavy financial costs in the future.

Fifth, a host country could also mandate the buyer country to provide separate financing to support climate adaptation efforts as part of the overall terms of the cooperative approach.

5. Ensuring greater support for much-needed capacity-building in least developed countries

Capacity-building in LDCs is crucial for enabling the development of domestic regulatory frameworks for carbon markets. It is an overarching challenge that pervades Articles 6.2 and 6.4 of the Paris Agreement. Multiple efforts across different workstreams are needed to overcome the shortfall of capacity in these countries. There is a push for greater UNFCCC support for Article 6 implementation, with LDCs repeatedly urging the UNFCCC to expand its capacity-building efforts (Government of Ethiopia, 2017a, 2017b; Government of Senegal, 2022a, 2022b), including by means of its regional collaboration centres. Additionally, capacity-building relating to carbon markets has started being included in technical cooperation programmes of other United Nations agencies acting in a coordinated and coherent manner so as to avoid duplication and create synergies.

LDCs are advised to continue to call on donor countries, particularly prospective buyers, to increase their funding and other support for UNFCCC Article 6 capacitybuilding efforts. Other independent agencies and entities that can impartially advise LDCs can also be of assistance.⁴ In addition, prospective carbon credit buyers may contribute resources to the UNFCCC secretariat and to other independent entities in their efforts to develop capacity-building activities and conduct workshops aimed at assisting LDCs, in particular in determining whether and to what extent they wish to engage in Article 6. While prospective buyer countries themselves may undertake such activities, most capacity-building efforts would better be managed by an independent entity that, unlike a prospective buyer, does not stand to benefit from the outcomes of a potential cooperative approach. This is important so as to ensure not only against possible conflicts of interest, but also that LDCs and other host countries do not feel under undue pressure and that they receive impartial advice.

As part of intensified capacity-building efforts, it is important for LDCs to be well-equipped to comply with international requirements and obligations related to carbon market participation. They also need to acquire the necessary skills to assess and negotiate carbon projects in such a way that projects make a positive contribution to their domestic structural transformation. Apart from gaining an understanding of the technicalities of carbon markets, this also means mastering the capability of linking carbon projects to broader national development plans and strategies and creating synergies between them. This wider approach requires moving away from a compartmentalized and siloed approach to technical assistance by promoting joint efforts across different international organizations and cooperation agencies.

Capacity-building in LDCs is crucial for enabling the development of domestic regulatory frameworks for carbon markets

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⁴ The mandate of the UNFCCC could be strengthened through a decision to expand its capacity-building products, activities and workshops for prospective host Parties, particularly LDCs. This decision would be taken by the Conference of Parties serving as Meeting of Parties to the Paris Agreement (CMA).

6. A future marked by equity: Strengthening Article 6 to boost sustainable development and structural transformation in the least developed countries

Imagine a future where Article 6 is bolstered to meet the development needs of LDCs, ushering in a wave of positive changes and opportunities for these countries. Article 6.2 sets the framework for exchanging internationally transferred mitigation outcomes through bilateral or multilateral agreements between countries. While internationally transferred mitigation outcomes are widely understood to refer to carbon credits, they could also involve the trading of mitigation outcomes that are not specific to GHGs (such as a kilowatt-hour (kWh) of renewable energy) or provide a way of recording trade in emission allowances between internationally linked cap-andtrade systems (for example, between the European Union and Switzerland).

Overarching rules relating to Article 6.2 were set at COP26 (Decision 2/CMA.3) and COP27 (Decision 6/CMA.4), but numerous outstanding issues remain to be resolved in negotiations, notably concerning arrangements for authorizing internationally transferred mitigation outcomes, reporting on and reviewing them, and promoting the overall transparency of the system. The remainder of section B provides further suggestions on how the international community can best support LDCs in maximizing the potential benefits of carbon markets by addressing specific considerations in Article 6.2 that are important to LDCs. Going forward to COP29 and beyond, the following are some of the key issues in Article 6 that are of concern to LDCs: the scope of cooperative approaches, the authorization statement, sequencing, confidentiality, the international registry and removal activities, as discussed below.

(a) Scope of cooperative approaches

Articles 6.1 and 6.2 of the Paris Agreement, as well as Decision 2/CMA.3 and Decision 6/CMA.4, provide a general understanding that a cooperative approach is undertaken "on a voluntary basis", that it "involve[s] the use of internationally transferred mitigation outcomes" and that certain principles should be upheld, including environmental integrity, transparency and robust accounting. However, specific details concerning the parameters for a cooperative approach are lacking, which can result in different interpretations of the guidance. Consequently, many countries fundamentally disagree on how uniform Article 6.2 implementation should be. LDCs need greater clarity on the definition and scope of a cooperative approach. This would introduce a higher degree of uniformity, provide greater transparency on what countries are doing, clarify expectations of prospective host Parties, and strengthen their position in defining the terms of their cooperative approach. While greater clarity concerning the scope of cooperative approaches will not necessarily deliver a more transparent system under Article 6.2 (which largely depends on national interpretations of the rules and a willingness to disclose information), it could indirectly support such an outcome. This may help increase the quality of cooperative approaches and help LDCs decide whether and how to become involved in Article 6.2.

Countries may choose to adopt a cooperative approach that entails trading internationally transferred mitigation outcomes using a specific methodology provided in Article 6.4, while also subscribing to other mutually agreed upon provisions, such as benefit-sharing , where a certain share of the mitigation remains in the host country and counts towards its nationally determined contributions, or where the cost of remediating reversals is split between the Parties.

Transparency in the cooperative approach, including on specifics, provides useful

information to all Parties, including LDCs, and can set a high bar that signals the level of disclosure that should be provided in such an approach.

LDCs and other developing countries may wish to pursue a mandatory template for authorizing cooperative approaches that disclose core details. A common template would ensure that all parties play by the same rules while minimizing the chance of potentially conflicting interpretations of how and when to authorize cooperative approaches and the steps to follow them. In the absence of a common template, each country is likely to pursue its own process for authorizing a cooperative approach. This risks creating inconsistencies or leading to non-compliance with the Article 6.2 rules, particularly by LDCs, which face more significant capacity constraints than many buyers.

(b) Authorization statement and sequencing

Authorization is an essential component of Article 6.2, since it: (a) represents formal government approval of the transfer or use of internationally transferred mitigation outcomes for a specific purpose (attainment of nationally determined contributions, use in compliance systems, or voluntary use by companies); (b) triggers a range of reporting requirements (with an initial report describing the cooperative approach that follows the authorization); and (c) has implications for when and how corresponding adjustments will be applied in order to avoid double counting of internationally transferred mitigation outcomes. The formal authorization of cooperative approaches and underlying

internationally transferred mitigation outcomes may closely overlap with defining the scope of a cooperative approach mentioned above. Again, for LDCs, it would be beneficial to have a common mandatory template requiring the disclosure of a minimum amount of information about each authorization. There remain ambiguities in Article 6.2 rules concerning whether there should be a mandatory sequence of steps, from post-authorization of a cooperative approach all the way through to the issuance and use of internationally transferred mitigation outcomes.⁵ For LDCs, a template with clear and mandatory sequencing may be beneficial to create a level playing field for all Parties, provide predictability, and minimize the risk of placing a significant burden on Parties in the long run. It would also ease capacity limitations that some LDCs may face.

(c) Confidentiality

Concerning confidentiality of information reported by Parties about their engagement in Article 6.2, LDCs and other countries would benefit from as much transparency as possible of Article 6.2. This would mean clarifying rules around confidentiality along the lines of the proposal tabled for negotiations at COP28. Delivering more clarity on confidentiality and boosting transparency in Article 6.2 would ensure that all Parties follow the same rules and pursue high-quality cooperative approaches. Possible actions include: (a) defining the types of information deemed confidential; (b) developing a code of conduct for Parties to justify confidentiality in order for reviewers to assess the claim for confidentiality and to handle confidential

LDCs and other developing countries may wish to pursue a mandatory template for authorizing cooperative approaches that disclose core details of cooperative approaches

Concerning confidentiality of LDCs would benefit from as much transparency as possible concerning information reported by Parties about their engagement in Article 6.2

⁵ The UNFCCC secretariat and an Article 6.2 technical expert review team must review various reports from Parties about their cooperative approaches and internationally transferred mitigation outcomes to ensure there are no "inconsistencies" in reporting, and that countries are complying with Article 6.2 requirements. Allowing the transfer and use of internationally transferred mitigation outcomes before a completed review can be problematic. For example, if, after the review has taken place, it turns out that a cooperative approach is not compliant with Article 6.2 rules but the underlying internationally transferred mitigation outcomes have already been used by another country towards its nationally determined contributions or by a company to fulfil a compliance obligation, it may be difficult, if not impossible, to rectify this situation: both from an environmental perspective (e.g. low-quality internationally transferred mitigation outcomes being used to offset fossil emissions) and from a practical perspective (e.g. an internationally transferred mitigation outcome used for compliance reasons in another jurisdiction that has a particular legal framework).

information appropriately; (c) developing a procedure to address instances where the basis for confidentiality is unclear, questionable or has not been provided; and (d) determining how to address cases where inconsistencies are detected regarding confidential information. In addition, LDCs that may wish to participate in Article 6.2 will benefit from greater transparency by being able to review other Parties' cooperative approaches and fulfilment of reporting requirements when assessing whether and how to engage in Article 6.

(d) International carbon registry

Rapid implementation of an international carbon registry by the UNFCCC secretariat is a priority for LDCs. The international carbon registry is an essential part of the Article 6.2 infrastructure and is likely to be used primarily by host countries, such as LDCs. Many of them do not have their own national carbon market registry or would prefer to use a system managed by the UNFCCC rather than by third-party registries run by companies or other non-governmental entities.

For LDCs, multilateral action on a carbon registry is especially important, as it avoids the burden of having to develop their own registries, for which they may not have the capacity or financial resources. For this to happen, there would first need to be a clear agreement at COP29 on whether the international registry can transact units, from Article 6.4 in particular, or if it will be limited to simply tracking internationally transferred mitigation outcomes traded elsewhere. For LDCs, it would likely be more beneficial for the international registry to allow authorized units from the Article 6.4 mechanism to be traded in the international registry.

In the absence of an international registry being established or fully functional (i.e. with the possibility to transfer units), LDCs may struggle to participate in Article 6.2, or they may resort to using registries of voluntary carbon market standards, which carries potential legal, security and conflict-of-interest risks. If the international carbon registry is operationalized, in preparations for its implementation LDCs will urgently need capacity-building in order to be able to fully benefit from its functionalities and operations (Government of Senegal, 2022a).

(e) Removal activities

These activities have been a contentious issue in Article 6 negotiations, particularly with regard to who is liable for measurement, reporting and verification after a project's last crediting period, for how long, and how reversals will be addressed. For LDCs, it is vital that there be clear rules determining liability for post-crediting measurement, reporting and verification and for remediation of reversals such that host countries are not unduly penalized. While different options have been proposed in the past, one way to minimize this risk could be to require a project developer to conduct mandatory post-crediting measurement, reporting and verification and remediation for reversals for at least 100 years, as already practised in other crediting systems. When Article 6.4 credits are authorized for use in nationally determined contributions, host countries, such as LDCs, could also include a requirement in their cooperative approach, whereby the buyer must assume full or partial liability for conducting long-term measurement, reporting and verification and remediation of reversals.

The international community has the responsibility to ensure that a potential outcome of removal activities at COP29 will not place an undue burden on LDCs, for instance in attributing liability for post-crediting measurement, reporting and verification and for long-term remediation of removals. A requirement that project developers conduct a minimum of 100 years of measurement, reporting and verification and address any reversals after the end of the last active crediting period would ensure that host countries are not burdened with the costs of doing this on their own.

Rapid implementation of an international carbon registry by the UNFCCC secretariat is a priority for LDCs



C. Conclusions

Since their launch in the mid-1990s, carbon markets have largely fallen short of their intended goals and promises, particularly for LDCs. This holds true whether they are evaluated in terms of augmenting financial inflows into these countries, their contribution to climate change mitigation or their contribution to the structural transformation of LDCs. While their positive impact has been limited at best, the outlook may improve with the transition of the carbon markets from the Clean Development Mechanism era to the Article 6 era, for different reasons. First, the new phase benefits from the experience accumulated in the previous era. Second, the awareness of the potentials and pitfalls of engagement with carbon markets has intensified among policymakers, private sector, civil society and other stakeholders originating from all countries Party to the Paris Agreement, including LDCs. Third, this heightened awareness and different stakeholders' determination to obtain better outcomes from carbon markets have led to the prolonged negotiations of the rules of implementation of Article 6. The expected positive outcomes will not happen automatically; they need decisive action by both the LDCs themselves and the international community.

LDCs need to adopt a proactive, strategic stance towards carbon markets, which entails considering if and how to participate in such a way that these markets are supportive of their development goals and structural transformation. LDCs that decide to participate will have to strengthen their institutional capacities and equip themselves with the skills to adopt clear negotiating positions vis-à-vis prospective investors, but also when participating in multilateral discussions.

LDCs require the support of the international community in helping them build the skills necessary to critically assess the opportunities and pitfalls of engaging with carbon markets. This supposes an understanding of not only the technical aspects of market operations and the corresponding mechanisms, but, critically, the contributions of those markets to the sustainable development and structural transformation of LDCs. It entails including carbon markets as one tool in a much broader toolbox of development policies. Similarly, development partners' support to LDCs on carbon markets should complement their support and obligations in other fields, such as finance and technology.

In all instances, the special circumstances of LDCs need to be acknowledged. Given that they are latecomers in the process of development, they have historically been low GHG emitters and remain so, contributing minimally to climate change. Therefore, the principle of common but differentiated responsibilities and respective capabilities needs to be applied to them whenever feasible and appropriate, so that their decision-making and policymaking with respect to their participation in carbon markets contributes to their long-term development.

References

Africa Carbon Markets Initiative (2024). Africa Carbon Markets: Status and Outlook Report 2024-25.

- Batterbury S and Ndi F (2018). Land-grabbing in Africa. In: Binns J A Lynch K, and Nel E, eds. *The Routledge Handbook of African Development*. Routledge. London: 573–582.
- Borras SM, Hall R, Scoones I, White B and Wolford W (2011). Towards a better understanding of global land grabbing: An editorial introduction. *Journal of Peasant Studies*. 38(2):209–216.
- Chagnon CW et al. (2022). From extractivism to global extractivism: The evolution of an organizing concept. *The Journal of Peasant Studies*. 49(4):760–792.
- Dalfiume S and Michaelowa A (2023). Assessing the robustness of carbon market grievance mechanisms and recommendations for the establishment of an Article 6.4 grievance mechanism. Perspectives Climate Group. Berlin.
- Dalfiume S, Michaelowa A, Crook J and Mulder I (2024). Assessing the robustness of carbon market grievance mechanisms: Update study. Carbon Market Watch and Perspectives Climate Group. Freiburg.
- FAO (2005). State of the World's Forests 2005. Food and Agriculture Organization. Rome.
- FAO (2022). The State of the World's Forests 2022: Forest Pathways for Green Recovery and Building Inclusive, Resilient and Sustainable Economies. Food and Agriculture Organization. Rome.
- FAO (2024). The State of the World's Forests 2024: Forest-Sector Innovations Towards a More Sustainable Future. Food and Agriculture Organization. Rome.
- Government of Ethiopia (2017a). Submission by the Federal Democratic Republic of Ethiopia on behalf of the Least Developed Countries Group on the Operationalization of Article 6, paragraph 4 of the Paris Agreement. LDC Group Submission on Operationalization of Article 6.4. United Nations Framework Convention on Climate Change. Bonn.
- Government of Ethiopia (2017b). Submission by the Federal Democratic Republic of Ethiopia on behalf of the Least Developed Countries Group on the Operationalization of Article 6, paragraph 2 of the Paris Agreement. LDC Group Submission on Operationalization of Article 6.2. United Nations Framework Convention on Climate Change. Bonn.
- Government of Senegal (2022a). Submission by Senegal on Behalf of the Least Developed Countries Group on Article 6.2 of the Paris Agreement: Views on options for implementing the infrastructure requirements referred to in chapter VI of the annex (recording and tracking). LDC Group Submission on Article 6.2. United Nations Framework Convention on Climate Change. Bonn.
- Government of Senegal (2022b). Submission by Senegal on Behalf of the Least Developed Countries group on Article 6.2 of the Paris Agreement: Views on options for the outlines for the information required pursuant to chapter IV of the annex (Reporting). LDC Group Submission on Article 6.2. United Nations Framework Convention on Climate Change. Bonn.
- IPCC (2021). Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press. Cambridge, United Kingdom.
- Keane J, Mendez-Parra M, Pettinotti L and Colenbrander S (2021). Carbon markets and standards: A new agenda for LDC negotiators. Policy Brief. Overseas Development Institute. London.
- Mayer J (2002). The Fallacy of Composition: A Review of the Literature. The World Economy. 25(6):875-894.
- UNCTAD (2006). The Least Developed Countries Report 2006: Developing Productive Capacities. (United Nations publication. Sales No. E.06.II.D.9. New York and Geneva).
- UNCTAD (2009). The Least Developed Countries Report 2009: The State and Development Governance. (United Nations publication. Sales No. E.09.II.D.9. New York and Geneva).

- UNCTAD (2013). Trade and Environment Review 2013: Wake up before It Is Too Late Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate. (United Nations publication. Geneva).
- UNCTAD (2015). *The Least Developed Countries Report 2015: Transforming Rural Economies*. (United Nations publication. Sales No. E.15.II.D.7. New York and Geneva).
- UNCTAD (2019). The Least Developed Countries Report 2019: The Present and Future of External Development Finance – Old Dependence, New Challenges. (United Nations publication. Sales No. E.20.II.D.2. Geneva).
- UNCTAD (2021). The Least Developed Countries Report 2021: The Least Developed Countries in the Post-COVID World: Learning from 50 Years of Experience. (United Nations publication. Sales No. E.22.II.D.40. New York and Geneva).
- UNCTAD (2022). The Least Developed Countries Report 2022: The Low-Carbon Transition and Its Daunting Implications for Structural Transformation. (United Nations publication. Sales No. E.22.II.D.40. Geneva).
- UNCTAD (2023). The Least Developed Countries Report 2023: Crisis-Resilient Development Finance. (United Nations publication. Sales No. E.23.D.27. Geneva).
- United Nations (1992). United Nations Framework Convention on Climate Change. Available at: https://unfccc. int/resource/docs/convkp/conveng.pdf
- UNFCCC (2022), Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its third session, held in Glasgow from 31 October to 13 November 2021. Available at: https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf#page=38 United Nations (2015). Paris Agreement. United Nations. Available at: https://unfccc.int/sites/default/files/english_paris_ agreement.pdf.
- Wallengren A, Frey C and Weldner K (2024). Integrating climate finance and carbon markets. Information Note. West Africa Alliance on Carbon Markets and Climate Finance. Dakar.