

# A practical guide to understanding carbon markets under Article 6 of the Paris Agreement

Questions and Answers for policymakers in Lao PDR

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# ACRONYMS AND ABBREVIATIONS

<b>A6.4ER</b>	Article 6.4 Emissions Reduction
<b>ACCU</b>	Australia Carbon Credit Units (Scheme)
<b>ACR</b>	American Carbon Registry
<b>ART-TREES</b>	Architecture for REDD+ Transactions - The REDD+ Environmental Excellence Standard
<b>BTR</b>	Biennial Transparency Report
<b>CDM</b>	Clean Development Mechanism
<b>COP</b>	Conference of Parties
<b>CMA</b>	Conference of the Parties Serving as the meeting of the Parties to the Paris Agreement
<b>CORSIA</b>	Carbon Offsetting and Reduction Scheme for International Aviation
<b>DMS</b>	Data management system
<b>ETF</b>	Enhanced Transparency Framework
<b>ETS</b>	Emission Trading Scheme
<b>GGGI</b>	Global Green Growth Institute
<b>GHG</b>	Greenhouse Gas
<b>IMF</b>	International Monetary Fund
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ITMO</b>	Internationally Transferred Mitigation Outcome
<b>JI</b>	Joint Implementation
<b>K-ETS</b>	Korea Emission Trading Scheme
<b>LEED</b>	Lao PDR Energy Efficient Datacenter Project
<b>LT-LEDS</b>	Long-Term Low Emissions Development Strategy
<b>MCU</b>	Mitigation Contribution Units
<b>MO</b>	Mitigation Outcome
<b>MOPA</b>	Mitigation Outcome Purchase Agreement
<b>(Mt)Co2</b>	(Mega tons of) Carbon Dioxide
<b>NDC</b>	Nationally Determined Contribution
<b>NSEDP</b>	National Socio-Economic Development Plan (of Lao PDR)
<b>OMGE</b>	Overall Mitigation in Global Emissions
<b>OTC</b>	Over-the-Counter (trading)
<b>REDD+</b>	Reduced Emissions from Deforestation and Degradation+
<b>RNA</b>	Readiness and Needs Assessment
<b>ROK</b>	Republic of Korea
<b>SDG</b>	Sustainable Development Goals
<b>SPAR6C</b>	Supporting Preparations for Article 6 Cooperation
<b>UN</b>	United Nations
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCM</b>	Voluntary Carbon Markets

# INTRODUCTION

The Government of Lao PDR is committed to update, since 2023, its legal, institutional, and policy framework to trade mitigation outcomes (i.e. emissions reductions) under the framework provided by the Paris Agreement's Article 6. Under the program for "Building Open and Sustainable Carbon Markets in Lao PDR", financed by the Government of Australia, GGGI provides technical assistance and capacity development for a comprehensive, coordinated, and coherent governance framework on carbon markets. From Article 6 participation, Lao PDR can expect to contribute to the overall mitigation of global emissions as per the Paris Agreement's goals and to channel resources towards sustainable development and climate action in Lao PDR.

This Practical Guide, translated in English and Lao, aims to disseminate critical concepts about Article 6 of the Paris Agreement to help Lao policymakers make evidence-based decisions when engaging Lao PDR in international climate cooperation. Considering the technical complexity of carbon markets and Article 6, this Guide breaks the topics of carbon markets and Article 6 in 8 themes (such as "the Article 6 rulebook" or "Administering Article 6") and 49 questions (such as "What is the Article 6 rulebook?" or "What requirements must countries meet to participate to Article 6?"). Answers referencing UNFCCC documents and international guidance prepared by leading international entities are proposed as well as links to access more information, should the reader be interested in delving deeper into a specific subject.

This guidance was prepared by the "Building Open and Sustainable Carbon Markets in Lao PDR" project team and the Carbon Pricing Global Practice, GGGI.

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# 1

## CARBON CREDITS

### 1. What are carbon credits?

**A carbon credit represents one ton of greenhouse gas (GHG) emission reductions or removals. It refers to specific units that are traded and used for both voluntary and compliance purposes.** Carbon credits can be used to mobilize finance, including from private sources, to support GHG emission reduction projects (or ‘mitigation activities’) that face barriers to implementation, such as lack of accessible finance or lack of access to required technologies. Buyers of carbon credits may use the credits to comply with international or national mitigation targets (i.e., for compliance purposes) or to meet corporate or organizational objectives (i.e., for voluntary purposes).<sup>1</sup> Under the Paris Agreement, carbon credits that have been authorized for a specific use are referred to as “Internationally Transferred Mitigation Outcomes” (ITMOs). See [What are ITMOs?](#)

### 2. How are carbon credits generated?

**Carbon credits are generated from activities that reduce or remove GHG emissions. These activities are referred to as ‘mitigation activities’ in the context of Article 6 of the Paris Agreement.** Mitigation activities must be developed in accordance with methodologies, procedures and standards established by carbon crediting mechanisms. Well-known carbon crediting mechanisms include independent mechanisms such as the Gold Standard and the Verified Carbon Standard, as well as UNFCCC-managed mechanisms such as the Clean Development Mechanism (CDM) and its successor, Article 6.4 Mechanism.

Credits are generated based on the extent of emission reduction (i.e., emissions reductions or removals) that an activity achieves compared to a baseline scenario (see Figure 1). Carbon crediting mechanisms develop and approve methodologies that specify how to calculate baselines and to measure the mitigation achieved by an activity.

Carbon crediting mechanisms also specify processes for the development of mitigation activities (such as stakeholder consultation requirements), the validation of a mitigation activity’s design by an independent auditor, and for the monitoring of activity implementation and independent verification that emissions reductions or removals have been achieved.

<sup>1</sup> Perspectives. 2023. Raising climate ambition with carbon credits. [Discussion paper.](#)

Following the verification of emissions reductions or removals by an auditor, the mitigation activity proponent will request the carbon crediting mechanism to ‘issue’ a corresponding amount of carbon credits. Carbon credits are issued into a registry account specified by the activity proponent. Each carbon crediting mechanism has a registry for the purpose of issuing and tracking carbon credits.

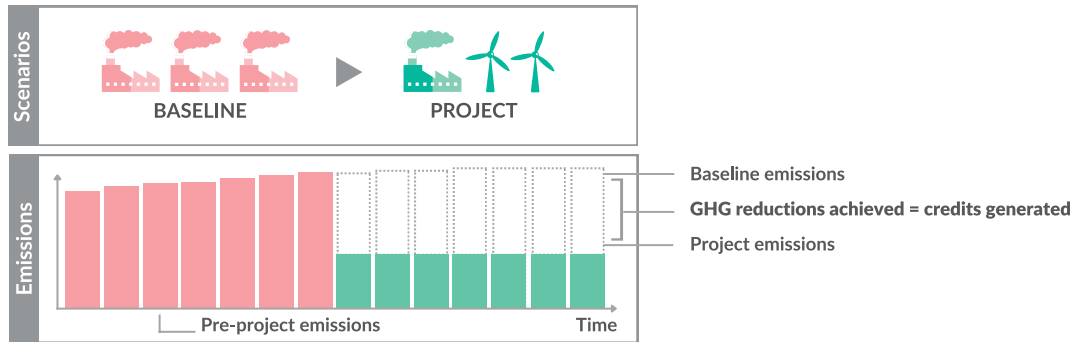


Figure 1. Generation of carbon credits. Source: VCM Primer.

### 3. How is carbon credit ownership established?

Carbon rights “define the underlying entitlement to benefit from GHG emission reductions or removals associated with an asset (e.g., land or forest) or activity (e.g., a mitigation activity).”<sup>2</sup> **By holding carbon rights, an entity can engage in an activity that generates carbon credits and transact and claim ownership of the proceeds from the sale of carbon credits.** National legislation plays a critical role in clarifying carbon rights and ownership.

### 4. How are carbon credits sold or traded?

Generally, there are two major practices. The first is through primary trading – i.e., direct trading between project developers and buyers. The second is through an intermediary, such as an exchange (i.e., a centralized marketplace for sellers and buyers to meet and trade) or a broker.

Actors that are involved in these transactions include:

- » **Mitigation activity proponents (or ‘project developers’)**: they develop and implement mitigation activities. Mitigation activity proponents register their mitigation activities with a carbon crediting mechanism and generate carbon credits. Mitigation activity proponents can be private or public entities, or non-governmental organizations.
- » **End-buyers**: they purchase carbon credits for various compliance and voluntary purposes. End-buyers can be private or public entities, non-

<sup>2</sup> Climate Focus. Chapter 10: How are carbon rights considered in the voluntary carbon market? In *Voluntary Carbon Market Explained*. 2024.



governmental organizations, or even individuals. End-buyers may purchase carbon credits directly (through OTC transactions), or on the secondary market (through an exchange).

- » **Brokers / retailers:** they purchase carbon credits from mitigation activity proponents and sell them to end-buyers.
- » **Carbon crediting mechanisms:** they ensure relevant standards (e.g., methodological requirements) are met. Carbon crediting mechanisms may be managed by the UNFCCC, independent organizations, or national authorities.

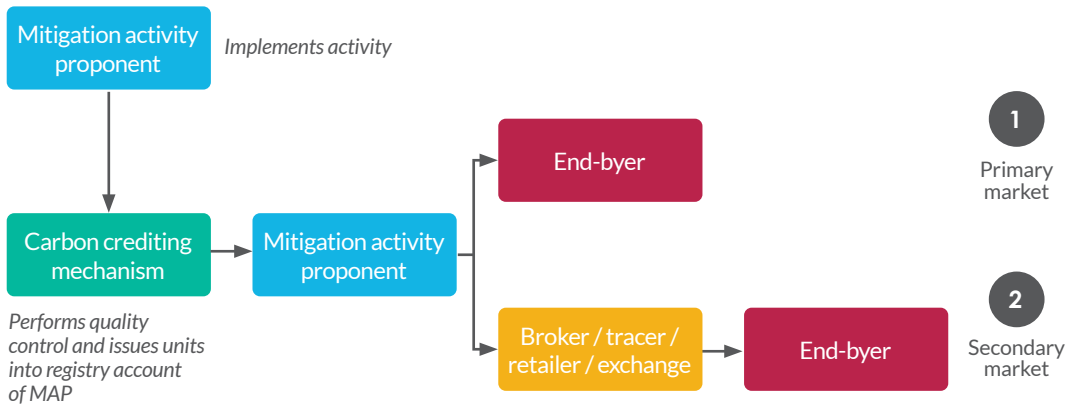


Figure 2. Primary and secondary markets for carbon credit trading. Source: Adapted from S&P Platts Global

## 5. How are carbon credits used by buyers?

There are two broad categories of carbon credit use:

1. **Compliance use:** it refers to cases where buyers use credits to fulfill a compliance obligation established by either international or domestic regulation. An example of an international compliance scheme is the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).<sup>3</sup> Under CORSIA, international airlines are required to reduce emissions against a specified baseline, and compensate for any emissions that exceed this baseline by purchasing carbon credits. These carbon credits must be authorized for use under Article 6 of the Paris Agreement. Domestic compliance schemes – such as Singapore’s carbon tax, or the Korea Emissions Trading Scheme (K-ETS) – also allow regulated entities to partially meet their compliance obligations through the use of carbon credits.
2. **Voluntary use:** voluntary use refers to cases where buyers use credits towards voluntary targets or goals (i.e., not to meet mandated compliance obligations). For example, many corporations have established voluntary climate targets and seek to use carbon credits to partially support achievement of these targets. Currently, most carbon credits are still being used for voluntary purposes (see Figure 3).

<sup>3</sup> Carbon Offsetting and Reduction Scheme for International Aviation, 2024.

It is important to note that a carbon credit is defined as a “compliance” or “voluntary” unit depending on its use, and not because of the carbon crediting mechanism used to generate the credit. For example, carbon credits issued by the Gold Standard mechanism are not “voluntary” credits unless they are used by buyers for voluntary purposes.

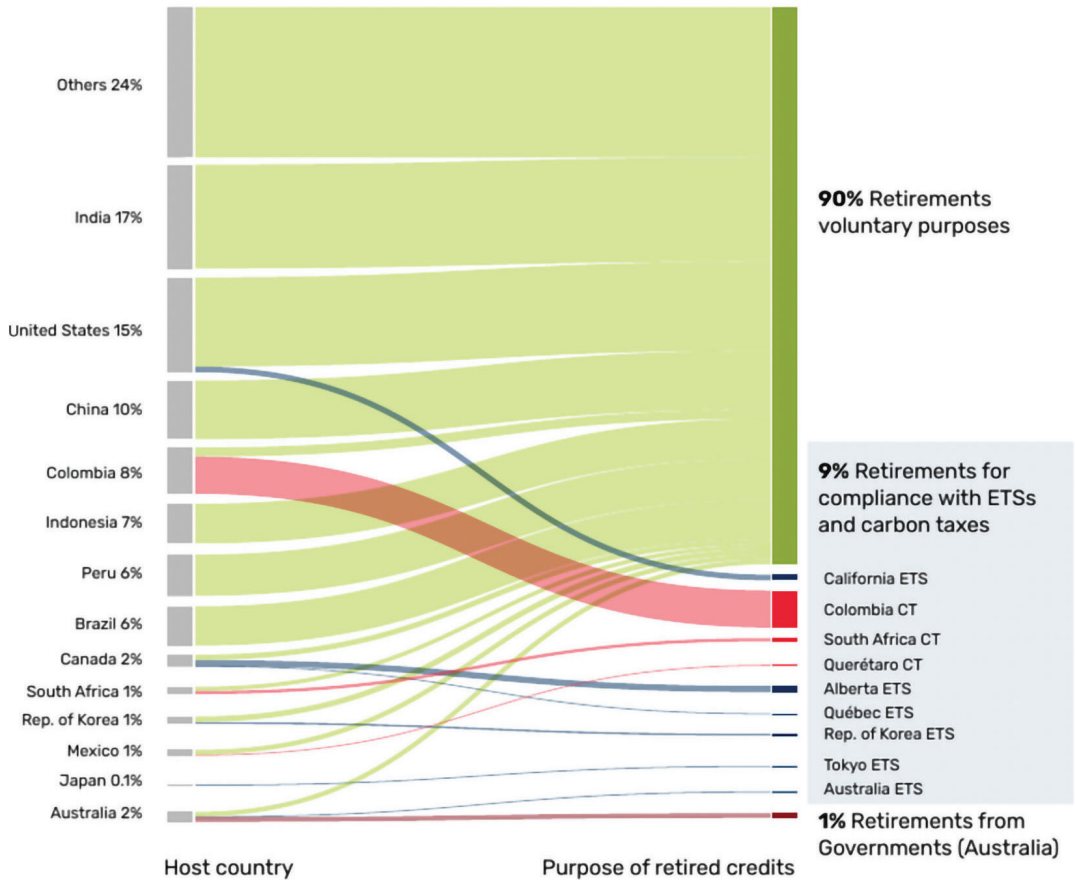


Figure 3. Carbon credit use. Source: World Bank 2024

## 6. Where can I learn more about carbon credits?

Carbon credit topics are gaining prominence, and many organizations have developed essential sources of knowledge relevant to the topics. Below are some useful recommendations.

- » **Carbon pricing glossary (Lao-English):** defines fundamental terms on carbon pricing with easy-to-understand explanations.<sup>4</sup>
- » **Supporting Preparedness for Article 6 Cooperation (SPAR6C) website:** the SPAR6C program, led by GGGI, has developed a set of

<sup>4</sup>Glossary of Terms will be available on GGGI's website by the end of 2024.

toolbox guides on key topics including Article 6 strategy development, institutional arrangements for Article 6, and mitigation activity development.<sup>5</sup>

- » **World Bank:** the World Bank’s Climate Warehouse website publishes knowledge products related to Article 6 of the Paris Agreement.<sup>6</sup> The World Bank also publishes an annual report on the ‘State and Trends of Carbon Pricing’.<sup>7</sup>
- » **VCM Primer:** The Voluntary Carbon Market (VCM) Primer, developed by Climate Focus, provides an overview of different components of voluntary carbon markets.

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# 2

## CARBON MARKETS

### 7. What are the different types of carbon pricing instruments?

The three main types of carbon pricing instruments are, according to the World Bank Carbon Pricing Dashboard<sup>8</sup>:

- » **Carbon tax:** A set tax (or price) applied to all GHG emissions in a particular sector, or on an economy-wide basis.
- » **Emissions trading system (ETS):** A system where emitters are issued allowances to emit a certain volume of GHG emissions. To comply with their emission targets at least cost, regulated entities can either implement internal abatement measures or acquire allowances from other entities covered by the ETS that have emitted less than the maximum volume (or less than the specified “cap”), depending on the relative costs of these two options. Some ETS schemes also allow regulated entities to purchase carbon credits to comply with their emission targets. By creating supply and demand for emissions allowances, an ETS establishes a market price for GHG emissions.
- » **Carbon crediting mechanism:** A crediting mechanism is a system that allows for the remuneration of emission reductions by issuing tradable offset credits for emission reductions actually achieved. Carbon credits issued by carbon crediting mechanisms are tradable units that represent one ton of GHG emission reductions or removals. Carbon

<sup>5</sup>GGGI, Supporting Preparations for Article 6 Cooperation, [Toolbox for Article 6](#).

<sup>6</sup>World Bank, [Knowledge base of the Climate Warehouse](#).

<sup>7</sup>World Bank, [States and Trends of Carbon Pricing series](#).

<sup>8</sup>World Bank, [Carbon Pricing Dashboard, 2024](#).

credits allow entities (such as companies or countries) to compensate for their GHG emissions by paying someone else to either reduce their emissions or capture their carbon. Carbon credits are distinct from the allowances that are traded in cap-and-trade systems. Allowances are tradeable permits that authorize the holder to emit a certain quantity of GHGs in the future, while carbon credits represent emissions that were sequestered or avoided in the past.

## 8. What is the role of carbon markets in supporting climate change mitigation?

**A carbon market is a carbon pricing policy instrument in which agents buy and sell credits representing emissions reductions or pollution permits.** In the Carbon Market Challenge<sup>9</sup>, Regina Betz et al. define carbon markets as “markets where a certain amount of GHG is commodified as a tradable unit either as an emission allowance under a cap-and-trade system or as a verified emission reduction/ removal credit issued under a baseline-and-credit system”. Together with bans (i.e. certain types of pollution are not allowed) and carbon taxation (i.e. polluters pay a certain amount per ton of GHG emission), carbon markets incentivize agents to switch to cleaner forms of production. Carbon markets provide a mechanism through which finance can be channeled to mitigation activities that face barriers to implementation, such as lack of finance or lack of access to technologies<sup>10</sup>.

## 9. Are all carbon markets the same or are there different types?

**There are different types of carbon markets.** Historically, the main difference between carbon markets has been whether the credits traded within a system are used for “compliance” or “voluntary” purposes. The difference between compliance and voluntary markets has to do with whether agents are legally bound to meet certain emissions targets, or not. See: [How are carbon credits used by buyers?](#)

**In addition, there are different types of carbon crediting mechanisms.** A carbon crediting mechanism is a system that allows for the remuneration of emission reductions by issuing tradable offset credits for emission reductions actually achieved. Fundamentally, carbon crediting mechanisms are responsible for developing and approving methodologies to calculate emission reductions, registering mitigation activities (or carbon projects), and issuing carbon credits for verified emission reductions. The main types of carbon crediting mechanisms are:

<sup>9</sup> R. Betz et al., *The Carbon Market Challenge, Preventing Abuse Through Effective Governance*, Cambridge University Press, 2022.

<sup>10</sup> J. Henderson, *A Review of Global Carbon Markets*, Oxford Institute for Energy Studies, 2022.

- » **International crediting mechanisms** are those governed by international climate treaties and are usually administered by international institutions, such as the UNFCCC. Under the Kyoto Protocol, for example, mechanisms included the Clean Development Mechanism (CDM) and the Joint Implementation (JI) mechanism. Under the Paris Agreement, a new crediting mechanism has been established through Article 6.4.
- » **Governmental (domestic) crediting mechanisms** are governed by national regulation and can include national or regional offset programs such as the Australian Carbon Credit Units (ACCU) Scheme, California Compliance Offset Program, or the Tokyo Cap-and-Trade Program.
- » **Independent crediting mechanisms** are not governed by any national regulation or international treaties. They are administered by private and independent third-party organizations, which are often nongovernmental organizations. Examples of independent crediting mechanisms include the American Carbon Registry (ACR), Gold Standard, and the Verified Carbon Standard, or Verra.

From 2023, the World Bank reported that annual registrations of carbon projects by crediting mechanism included<sup>11</sup>:

- » **Governmental (domestic) mechanisms:** Australian Carbon Credit Unit Scheme (29%), Thailand Voluntary Emission Reduction Program (5%), other governmental mechanisms (12%)
- » **Independent crediting mechanisms:** Gold Standard (26%), Verified Carbon Standard (17%), American Carbon Registry (7%), and Climate Action Reserve (4%).
- » **International crediting mechanisms:** since the end of the CDM, there has not been any credit issuance, but nearly 1,400 CDM activities requested Article 6 transition. See [Can CDM activities transition to Article 6.4 Mechanism?](#).

**It is important to note that Article 6.2 of the Paris Agreement provides a framework that can cover different types of carbon markets** (i.e., both “compliance” and “voluntary” market segments), as well as credits issued by different types of carbon crediting mechanisms – see [What is the Paris Agreement’s Article 6.2?](#)

Results-based finance is also sometimes seen as a type of carbon market, whereby Governments or international organizations buy emissions reductions to support countries meeting specific targets (e.g. the Reducing Emissions from Deforestation and Degradation + scheme). However, there are marked differences between results-based finance and carbon markets: see for instance [Can emission reductions from REDD+ be traded under Article 6.2?](#).

<sup>11</sup>World Bank, State and Trends of Carbon Pricing, 2024.

## 10. Is a carbon market or a carbon tax preferable?

**The decision to opt for a carbon tax and/or a carbon market depends on specificities and the objectives of the concerned country/ jurisdiction.**

The IMF explains that, in general, if a country wants certainty over revenue generation (for potential reinvestment in climate action), carbon taxation is more appropriate<sup>12</sup>. This is because the revenues from taxation go to the central Government budget, which can allocate it depending on its priorities, and because the actual cost of mitigation may change due to fluctuations in abatement costs. Conversely, if a country wants more certainty over emissions reductions, compliance markets (providing that the overall cap of emissions is set to an efficient level) are more appropriate. This is because emission reductions are traded based on market conditions, reflecting the actual cost of mitigation.

An additional criterion is related to administrative capacity: carbon taxes are considered simpler and cheaper to administer than carbon markets. Coverage can also be a decisive element: because of the extensive capacity that carbon markets require for administration, they are typically focused on a smaller number of sectors. Acceptability of the policy matters but the IMF does not see big differences in terms of distributional outcomes (i.e. who is better-off or worse-off from the policy). Individuals and companies are often reluctant to the introduction of new taxes, while market mechanisms are often more popular as they are seen to allow more flexibility for producers.

Most countries are looking to use all available policy instruments. The World Bank reported that countries were eyeing mixed systems with crediting systems (voluntary credits are generated) connected to an emissions trading scheme (where eligible credits are bought to satisfy compulsory emissions targets), thereby working as a source of demand. Singapore has recently allowed companies to offset a portion of their carbon tax obligations with international credits that are authorized in accordance with Article 6 of the Paris Agreement (i.e., credits with corresponding adjustments applied).

<sup>12</sup> IMF Staff Climate Note, *Carbon Taxes of Emissions Trading Systems? Instrument Choice and Design*, 2022.

## 11. Why have carbon markets been controversial?

Most controversies related to carbon markets have been in relation to crediting mechanisms, and particularly the over-issuance of carbon credits. In recent cases reported in international media outlets and academic journals, REDD+ credits were generated and exchanged but had limited, no, or even negative mitigation and social impacts. These challenges were specifically observed in the forestry sector: the measurements of carbon storage or reduced deforestation/ degradation are often inaccurate and indigenous groups' land rights have been infringed upon.

Studies from the Guardian, Die Zeit, and SourceMaterial found that 90% of forestry credits in Verra (a leading independent crediting mechanism) had had no real impacts on emissions reductions<sup>13</sup>. A study published in Science looked at forestry programs more broadly, finding that avoided emissions from deforestation had been overestimated. Some NGOs have criticized and requested the end of the Clean Development Mechanism, which is thought to have supported projects with limited mitigation impacts, adverse development effects, and which infringed on human rights.

The concerns that carbon markets face relate to the specificity of the goods being traded<sup>14</sup>. The commodification of carbon happens with the certification, by a third-party entity with recognized authority, that emission reductions took place. The certification sets what the volume precisely is and for how long the newly created good shall be valid. For all parties involved - project developers, national authorities, and certifiers - uncertainties over the science and methodologies to adopt, and data gaps make verifications, monitoring, evaluation, and reporting particularly difficult.

Additionally, there can be trade-offs between climate mitigation - which only focuses on reducing GHG emissions - and other sustainable development priorities, such as biodiversity conservation (if a natural habitat is degraded because of a carbon project), human rights (if it causes displacements), or health (if it leads to contamination).

There are ongoing initiatives on voluntary markets to increase the level of quality and rigor in carbon markets: the Science Based Target Initiatives, the Voluntary Carbon Credit Integrity Initiative, or the Integrity Council for the Voluntary Market<sup>15</sup>. Article 6 of the Paris Agreement also provides a framework for greater host country regulation and oversight of mitigation activities that are implemented in that country, through the requirement for mitigation outcomes (i.e., credits) generated by such activities to be authorized for use and international transfer by the host country government.

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<sup>13</sup> [The Guardian, Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows, 2023.](#)

<sup>14</sup> [Center for Strategic and International Studies, What's Plaguing Voluntary Carbon Markets?, 2024.](#)

<sup>15</sup> [Center for Strategic and International Studies, Voluntary Carbon Markets: A Review of Global Initiatives and Evolving Models, 2023.](#)

# 3

## THE PARIS AGREEMENT AND ITS ARTICLE 6

### 12. What is the Paris Agreement and Article 6?

The Paris Agreement is an international legally binding treaty that was adopted by 196 countries at the twenty first session of the Conference of Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC), on 12 December 2015, in Paris, France. Most importantly, the Paris Agreement sets a long-term temperature goal (Article 2): global emission reduction targets to hold global temperature to well below 2°C above pre-industrial levels and encourages efforts to limit warming to 1.5°C above pre-industrial levels. The Paris Agreement sets expectations on Parties to achieve these goals: Parties must submit their national plans and targets (Nationally Determined Contributions) every five years with increasingly ambitious targets in each round of submission, while also being encouraged to develop their long-term greenhouse gas emission development strategies.<sup>16</sup>

Article 6 of the Paris Agreement allows Parties to voluntarily cooperate to achieve their emission reduction (mitigation) targets set in NDCs. For countries interested in purchasing Article 6 credits, this is because some mitigation can be achieved more cheaply abroad than through domestic mitigation measures. For countries looking to sell Article 6 credits, Article 6 participation can provide a source of finance and/or technology to implement mitigation activities that would otherwise not be possible (for e.g., because they lack the resources, technology, or capacity). Development co-benefits from mitigation activities can also be achieved.

The Paris Agreement also has dispositions on adaptation (Article 7), loss and damage (Article 8), finance, technology, education, and capacity-building (Articles 9, 10, 11, and 12) as well as transparency and reporting (Article 14).<sup>17</sup>

### 13. What is the Paris Agreement's Article 6.2?

Article 6.2 of the Paris Agreement provides an overarching framework for “voluntary cooperation” to achieve global climate goals:<sup>18</sup> Parties can trade emissions reductions authorized by the relevant host country (called Internationally Transferred Mitigation Outcomes, or ITMOs) to support achievement of their nationally determined contributions (and to promote sustainable development) providing that there is robust

<sup>16</sup> UNFCCC, *The Paris Agreement*, 2024.

<sup>17</sup> UNFCCC, *Paris Agreement to the United Nations Framework Convention on Climate Change*, 2015.

<sup>18</sup> *Ibid.*, Art. 6.



accounting and no double counting.<sup>19</sup> Guidance for the implementation of this market was developed in later Conference of Parties: see [What is the Article 6 rulebook?](#) and [What should I know about Decision2/CMA.3, “Guidance on Cooperative approaches referred to in Article 6, paragraph 2 of the Paris Agreement”?](#).

## 14. What is the Paris Agreement’s Article 6.4?

**Article 6.4 of the Paris Agreement provides for the creation of a centralized international crediting mechanism for the issuance of mitigation outcomes that also contribute to sustainable development, which is placed under the supervision of the UNFCCC.** It is the successor of the Clean Development Mechanism, which operated under the Kyoto Protocol.<sup>20</sup> Initial rules, modalities and procedures have been agreed (see [What is the Article 6 rulebook?](#) and [What should I know about Decision3/CMA.3, “Rules, modalities, and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement”?](#)) but guidance for the implementation of this crediting mechanism has not been finalized yet (see [Is Article 6 operational? What happened at COP28 with regards to Article 6?](#)).

## 15. What are the main differences between Article 6.2 and Article 6.4?

**Articles 6.2 and 6.4 are complementary: Article 6.2 sets the rules for international cooperation on the trading of mitigation outcomes while Article 6.4 creates a crediting mechanism (e.g. which will develop and approve methodologies to calculate emission reductions, issue credits, and provide a registry).** In practice, this means that Parties can transfer Article 6.4 credits (known as Article 6.4 emission reductions, or A6.4ERs) that have been authorized as ITMOs under Article 6.2. However, it is important to note that ITMOs can be issued by other carbon crediting mechanisms (providing that they fulfill all requirements under Article 6.2), provided that the relevant host country authorities have authorized the use and transfer of such ITMOs. One key difference is also that Article 6.2 is based on voluntary cooperation and can be tailored by the trading countries, while Article 6.4 is centrally regulated by Article 6.4 Supervisory Body.

Additionally, Article 6.2 does not require (but encourages) contributions to adaptation and overall mitigation goals (through credit cancellation). Article 6.4 requires credits 5% of proceeds towards the Adaptation Fund, as well as 2% of credit cancellation to contribute to the Overall Mitigation of Global Emissions (OMGE).<sup>21</sup>

<sup>19</sup> World Bank, [What You Need to Know About Article 6 of the Paris Agreement](#), 2022.

<sup>20</sup> Harjas K. Dhillon and Maria Roxo Bacha, [Progress Made on Paris Agreement Article 6.4 at Bonn: Talks to Continue in Dubai](#), White & Case LLP, 2023.

<sup>21</sup> Jonathan Crook, [Everything You Need to Know about Article 6 at COP28](#), Carbon Market Watch, November 24, 2023.

## 16. How are Article 6.4 and the Clean Development Mechanism different?

The Clean Development Mechanism (CDM) was the UNFCCC-managed carbon crediting mechanism established under the Kyoto Protocol. As a carbon crediting mechanism, it developed and approved methodologies for calculating emission reductions, registered projects, and issued carbon credits generated by registered projects. **The CDM is no longer operational, and discontinued issuing Certified Emission Reduction units (i.e., carbon credits) at the end of 2020.**

**Article 6.4 Mechanism is the carbon crediting mechanism established under the Paris Agreement that replaces the CDM.** Like the CDM, Article 6.4 Mechanism is managed by the UNFCCC (through an Article 6.4 Supervisory Body).

A key difference between the CDM and Article 6.4 Mechanism is that Article 6 requires greater host country involvement, due to the need to approve projects seeking registration under Article 6.4 Mechanism and to authorize the transfer of ITMOs generated by such projects, in accordance with Article 6.2 Guidance. Importantly, Article 6.4 Mechanism is not yet operational.

Another key difference is that CDM only allowed projects between Annex 1 Parties (developed countries) and non-annex 1 Parties, while Article 6.4 allows projects of all Parties.<sup>22</sup>

## 17. Can CDM activities transition to Article 6.4 Mechanism?

**Article 6.4 rules agreed at COP26 (in Decision 3/CMA.3) allows for the transition of CDM projects to Article 6.4 Mechanism, contingent upon host country approval.** The key issue for host countries is therefore deciding whether to approve the requested transition of CDM projects and programs of activities to Article 6.4 Mechanism.<sup>23</sup>

**For CDM projects that transition to Article 6.4 Mechanism and subsequently generate Article 6.4 Emission Reductions (A6.4ERs) that are transferred as ITMOs, the host country will be required to apply corresponding adjustments.**<sup>24</sup> There is a potentially high overselling risk associated with the transfer of ITMOs generated from old CDM activities, given that in many instances they are considered part of the “baseline” scenario for current NDCs. As such, emission reductions achieved by such projects likely do not reduce the country’s GHG inventory below the baseline established in the NDC business-as-usual scenario, and corresponding adjustments will therefore move the country further away from its NDC goals.

<sup>22</sup> [European Capacity Building Initiative, Pocket Guide to Article 6, Oxford Climate Policy, 2022.](#)

<sup>23</sup> [GGGI, Guidance on governance models for host country engagement in Article 6, 2022.](#)

<sup>24</sup> [GGGI, Guidance on governance models for host country engagement in Article 6, 2022.](#)

Decision 3/CMA.3 also establishes rules regarding the transition of CDM projects and programs of activities to Article 6.4:

- » Project proponents must request transition by the end of 2023. This deadline has already passed. More information is available on the UNFCCC website <sup>25</sup>.
- » The relevant host country must approve the transition of CDM activities by the end of 2025.
- » The project or program of activities:
  - Must have a crediting period that is active as of 1 January 2021, and ends either at the end of the current CDM crediting period or by 31 December 2025 (whichever is earlier)
  - May continue to use the currently applied CDM methodology until the renewal of the crediting period of 31 December 2025 (whichever is earlier), after which an approved Article 6.4 methodology must be applied
  - Must meet additional activity design requirements, such as addressing the risk of non-permanence and minimizing negative social impacts.

## 18. Does the Paris Agreement also consider voluntary markets?

The Paris Agreement considers voluntary carbon markets, because Article 6 of the Paris Agreement provides a framework that allows host countries to “authorize” mitigation outcomes and to transfer such authorized units internationally as ITMOs for both compliance and voluntary use cases.

Potential compliance use cases of ITMOs include:

- » **NDC purposes:** ITMOs used towards meeting another country’s NDC (i.e., the country that has bought the ITMOs).
- » **International mitigation purposes:** ITMOs used towards meeting an international airline’s compliance obligations under the CORSIA scheme (which requires international airlines to offset any emissions beyond a baseline level of emissions).

**Additionally, a host country may authorize ITMOs for “other purposes”.** The “other purposes” use case is widely understood to refer to the voluntary use of ITMOs, such as to meet voluntary mitigation targets (i.e. a country’s net-zero target) or to provide a voluntary contribution towards mitigation in a host country.

<sup>25</sup> UNFCCC, Transition of CDM activities to Article 6.4 Mechanism, 2024.

## 19. How can voluntary cooperation under Article 6 help a country achieve its climate objectives?

**Voluntary cooperation under Article 6 can support countries to implement and enhance domestic mitigation plans, both in the short-run and long-run.**<sup>26</sup> Nationally Determined Contributions (NDCs) and Long-Term Low-Emission Development Strategies (LT-LEDS) are the short and long-term national climate mitigation plans of Parties to the Paris Agreement.

As per Article 4 of the Paris Agreement, the preparation of NDCs is a requirement for Parties. They contain the measures that a country plans to implement to reduce GHG emissions and must be enhanced and communicated to the UNFCCC every five years. LT-LEDS are not compulsory but recommended under the Paris Agreement, as they provide a longer-term outlook which can guide the development of NDCs.

Voluntary cooperation under Article 6 is one of the tools available to countries to support the implementation and enhancement of domestic mitigation measures. There are two broad ways Article 6 can support the achievement of NDC and broader climate objectives (such as long-term targets):

- » Under Article 6, countries can sell ITMOs in exchange for resources (technological and financial), which can in turn be used to implement domestic mitigation measures that would not be possible to achieve without carbon finance. The carbon finance does not directly go to Governments but to the mitigation project developer. However, through levies, fees, and charges, Governments can reinvest in additional domestic mitigation measures.
- » Countries can choose to reserve some mitigation outcomes for domestic use and NDC compliance: for example, Ghana, Cambodia, Rwanda, Indonesia have all specified percentages (ranging from 1 to 20% of total mitigation outcomes issued from a mitigation activity) in this regard. Such a strategy can help host countries that are selling ITMOs to avoid the risk of “overselling” and support achievement of their conditional NDC targets. See [Can countries reserve a share of mitigation outcomes generated by an Article 6 mitigation activity in order to achieve their NDC?](#)

Countries need to carefully identify which sectors and which projects for which they would like to trade mitigation outcomes. Countries may for instance be tempted to leave high-hanging fruits (i.e. the most expensive mitigation measures) to voluntary cooperation and use available domestic resources to achieve the cheapest and most accessible mitigation measures. Governments may also seek to prioritize mitigation activities that deliver sustainable development co-benefits (e.g. green jobs,

<sup>26</sup> ADB, *National Strategies for Carbon Markets under the Paris Agreement: Making Informed Policy Choices*, 2023.

economic growth, clean air). A recent brief on Indonesia explains how Article 6 can help to achieve the country's net-zero targets.<sup>27</sup>

The development of an Article 6 strategy can help a host country guide their decisions regarding voluntary cooperation to make it a valuable tool for the achievement of their climate ambitions. See [What is the role of an Article 6 strategy and what should it look like?](#)

## 20. What is the Enhanced Transparency Framework under Article 13? Why is it relevant for Article 6?

**Article 13 of the Paris Agreement establishes an Enhanced Transparency Framework (ETF) “in order to build mutual trust and confidence and to promote effective implementation” of the Paris Agreement.**<sup>28</sup> As provided in Article 13(5), the purpose of the ETF “is to provide a clear understanding of climate change action in the light of the objective of the Convention (...) including clarity and tracking of progress towards achieving Parties’ individual nationally determined contributions (...) and Parties’ adaptation actions (...) to inform the global stocktake.” In essence, the ETF aims to generate data and information to keep track of progress towards agreed global climate objectives.

The ETF consists of three main elements: reporting, a technical expert review, and a facilitative, multilateral consideration of progress. Details on each element are provided below:

- » **Reporting:** all countries must regularly report on (1) a national greenhouse gas (GHG) inventory and (2) information necessary to track progress made in implementing and achieving NDCs. **The main reporting document is the Biennial Transparency Report (BTR),** which includes information on:
  - National circumstances and institutional arrangements;
  - National inventory report;
  - Description of the NDC and any updates (including information on targets, target year/period, reference point, scope and coverage, use of cooperative approaches);
  - Information necessary to track progress made in implementing and achieving the NDC.
  - The GHG inventory report may be part of this report or submitted as a stand-alone document.
- » **Technical review:** the technical expert review will review the consistency of the information submitted in BTRs, consider the Party's implementation and achievement of its NDC, consider support provided by the Party, identify areas of improvement related to implementation, and assist in identifying capacity-building needs for developing countries.

<sup>27</sup> [Neyen, How can Indonesia leverage Carbon Markets under Article 6 of the Paris Agreement to meet its Net Zero Emissions target?, 2024.](#)

<sup>28</sup> [UNFCCC, Reference Manual for the Enhanced Transparency Framework under the Paris Agreement, 2023.](#)

- » **Facilitative, multilateral consideration of progress:** the facilitative, multilateral consideration of progress provides a public opportunity to showcase a Party's activities related to climate change mitigation and adaptation as well as the support provided, needed and received.

Countries engaging in Article 6 cooperative approaches must also report to the UNFCCC. Such reporting is linked to the ETF. As per Article 6.2 guidance (see [What should I know about Decision2/CMA.3, "Guidance on Cooperative approaches referred to in Article 6, paragraph 2 of the Paris Agreement"?](#)), countries participating in Article 6 cooperative approaches must submit: an initial report for each cooperative approach; Annual information to be submitted to Article 6 Database (operated by the UNFCCC); and Regular information (annexed to the BTR). See [What reports are expected from countries engaging in Article 6?](#)

According to the modalities, procedures and guidelines of the ETF, countries engaging in Article 6 cooperative approaches must report in the BTR how each cooperative approach promotes sustainable development, ensures environmental integrity and transparency, and applies robust accounting. Information submitted by countries participating in Article 6 cooperative approaches will be reviewed by an Article 6 technical expert review team, who will then prepare a report on its review with recommendations to the participating country on how to improve consistency. Article 6 technical expert review team will also submit its reports to the Technical Expert Review under the ETF for their consideration. These reports are required to be made publicly available.<sup>29</sup>

## 21. How does Article 6 ensure environmental integrity?

In the context of carbon trading, environmental integrity means ensuring that the use of carbon credits does not lead to an increase in total global emissions. Article 6.2 requires that countries report on how their engagement in cooperative approaches ensures "environmental integrity". This includes demonstrating that:

- » There is no net increase in global emissions within and between NDC implementation periods;
- » Mitigation outcomes (MOs) are high quality (i.e. deliver high volumes of emissions reductions), including through the use of conservative baselines;
- » The risk of non-permanence of mitigation (i.e. the reversal of mitigation achieved by a mitigation activity ) across several NDC periods is minimized.

<sup>29</sup> Initiative for Climate Action Transparency (ICAT), [Transparency for cooperative approaches under the Paris Agreement: A guide to navigating the links between Articles 6 and 13, 2023](#).

A report by the World Bank's Climate Warehouse helps to further define environmental integrity and outlines steps for ensuring environmental integrity under Article 6 mechanisms.<sup>30</sup> According to this report, environmental integrity is fundamentally about ensuring that GHG emissions do not increase as a result of the transfer of mitigation outcomes (compared to a scenario where such transfers did not take place). There are four factors that affect environmental integrity:

1. Robust accounting of international transfers (including through the application of corresponding adjustments);
2. Quality of transferred MOs: high quality MOs should represent additional, permanent reductions that have not been overestimated;
3. Stringency of mitigation targets in the seller/host country;
4. Raising of ambition over time.

There are a number of measures that can be taken to help ensure environmental integrity:

- » Ensure the quality of MOs used in transfers (by using conservative crediting baselines, and limiting/shortening crediting periods);
- » Modify accounting for transfers to reflect uncertainty and ambition (e.g., by discounting ITMOs through the cancellation of a portion of issued credits);
- » Promote greater ambition: by clearly communicating how a country intends to increase ambition and the scope of NDC targets over time, and how Article 6 cooperation would increase this ambition.



<sup>30</sup>World Bank, *Ensuring Environmental Integrity under Article 6 Mechanisms, Article 6 Approach Paper Series, 2021*.

# 4

## THE ARTICLE 6 RULEBOOK

### 22. What is the Article 6 rulebook?

The Article 6 rulebook qualifies a set of decisions made by the supreme body of the UNFCCC – the Conferences of the Parties serving as the meeting of the Paris Agreement (CMA) – to operationalize the overarching dispositions of the Paris Agreement’s Article 6.2, 6.4, and 6.8. This guidance was adopted in Glasgow, United Kingdom at COP26 in 2021 after being initiated in Katowice, Poland at COP24 in 2016. The rulebook includes guidance on Articles 6.2, 6.4 and 6.8 respectively:

- » Decision2/CMA.3, “Guidance on cooperative approach referred to in Article 6, paragraph 2 of the Paris Agreement”;
- » Decision3/CMA.3, “Rules, modalities, and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement”;
- » Decision4/CMA.3, “Work programme under the framework for non-market approaches referred to in Article 6, paragraph 8, of the Paris Agreement”.

Since COP26, additional decisions on Articles 6.2 and 6.4 were agreed and are part of the rulebook:

- » Decision6/CMA.4, “Matters relating to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement”;
- » Decision7/CMA.4, “Guidance on the mechanism established by Article 6, paragraph 4, of the Paris Agreement”.

### 23. What should I know about Decision2/CMA.3, “Guidance on Cooperative approaches referred to in Article 6, paragraph 2 of the Paris Agreement”?

The Decision 2/CMA.3, “Guidance on cooperative approach referred to in Article 6, paragraph 2 of the Paris Agreement, adopted by the Parties to the Paris Agreement at the COP26 in Glasgow, 2021, outlines (1) the definition of ITMOs, and rules for the authorization of use of ITMOs; (2) participation requirements; (3) corresponding adjustments; (4) reporting; (5) review; (6) recording and tracking.<sup>31</sup>

<sup>31</sup> [UNFCCC.CMA.Decision 2/CMA.3.Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement, 2021.](#)



Key elements of Decision 2/CMA.3 include:

- » **ITMO definition:** ITMOs are defined as real, verifiable, and additional emissions reductions or removals which can be used towards NDCs or for other international mitigation purposes. They are measured in metric tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e).
- » **Participation requirements:** the decision clarifies participation requirements. See [What are Article 6 requirements countries must meet?](#)
- » **Corresponding adjustments:** the decision provides that Parties engaging in cooperative approaches must apply corresponding adjustments to avoid the double counting of ITMOs and specifies methods to do so. See [What is a corresponding adjustment mechanism and why is it important?](#)
- » **Reporting:** the decision clarifies reporting requirements placed on Parties. See [What reports are expected from countries engaging in Article 6?](#)
- » **Review:** the decision details the process for the review of reporting submissions by Parties.
- » **Recording and tracking:** Parties are expected to have or have access to a registry to track and record authorizations, transfers, acquisitions, and other key steps in the process of transacting ITMOs. The decision also provides for the establishment of an Article 6 database and centralized accounting and reporting platform, managed by the UNFCCC.

## 24. What should I know about Decision 6/CMA.4, “Matters relating to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement”?

Decision 6/CMA.4, “Matters relating to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement”, adopted by the Parties to the Paris Agreement at the COP27 in Sharm-el-Sheik, Egypt, in 2022 essentially provide more specifications to Decision 2/CMA.3, “Guidance on cooperative approach referred to in Article 6, paragraph 2 of the Paris Agreement.”<sup>32</sup>

Specifically, the decision provides guidance on the following points:

- » **Recording and tracking:** the decision specifies the requirements that registries must meet in terms of accounting and recording actions related to ITMOs (authorization, transfer, use, etc.). The objective is to ensure the traceability of mitigation outcomes and transfers. Registries are expected to be interoperable and able to feed into the

<sup>32</sup> UNFCCC CMA Decision 6/CMA.4 Matters relating to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement, 2022.

international registry maintained by the UNFCCC.

- » **Centralized accounting and reporting platform and Article 6 database:** the decision specifies the accounting and reporting platform must be digital and have templates, portals for submissions, areas for Parties, and areas for reviewers. The decision also requires common nomenclatures to be developed for consistency. It mandates that Article 6 database, tracking ITMOs, is integrated to the centralized accounting and reporting platform
- » **Technical expert reviews:** the decision specifies the scope and data and information needs of technical expert reviews; the composition of expert review committees; methodologies; and procedures.
- » **Outline of reports and submissions required:** the decision provides outlines for reports (initial report and regular information) that Parties are required to submit.

## 25. What should I know about Decision 3/CMA.3 “Rules, modalities, and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement”?

The Decision 3/CMA.3, “Rules, modalities, and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement”, adopted by the Parties to the Paris Agreement at the COP26 in Glasgow, United Kingdom, initiates the operationalization of Article 6.4 of the Paris Agreement (the crediting mechanism).<sup>33</sup>

Specifically, the decision provides rules on:

- » **Definitions:** the decision defines the term “Article 6.4 activity” as one that meets the requirements of Article 6.4 and Article 6.4 emissions reductions (A6.4ER) as the mitigation outcomes achieved from this activity.
- » **Roles for the CMA and the Supervisory Body:** the CMA is expected to guide the Supervisory Body overseeing the 6.4 mechanism. The guidance provides details on the composition of the Supervisory Body, according to gender and development status, and election procedures. The Supervisory Body is tasked with the administration of the 6.4 mechanism.
- » **Participation responsibilities:** as in Decision 2/CMA.3, “Guidance on cooperative approach referred to in Article 6, paragraph 2 of the Paris Agreement”, this decision specifies requirements for Parties to participate in the Sustainable Development Mechanism.
- » **Activity cycle:** the decision provides guidance on methodologies, approval and authorization, validation, registration, monitoring, verification and certification, issuance, renewals, first transfers, and voluntary cancellation.

<sup>33</sup> UNFCCC CMA.Decision 3/CMA.3 Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement, 2021.

- » **Mechanism registry:** the decision specifies the registry's different accounts.
- » **Levy and share of proceeds:** the decision authorizes Parties to levy proceeds to manage the global costs of adaptation (5% of A6.4ERs at issuance) and administrative costs of participation to Article 6.4. A cancellation of ITMOs of 2% is compulsory at issuance, to contribute to overall mitigation in global emissions (OMGE).
- » **Avoiding double-counting:** the decision mandates the application of corresponding adjustments, for both NDC compliance and other international mitigation purposes.
- » **Transition from the Clean Development Mechanism to Article 6.4 Mechanism:** the decision clarifies the timeline for transition and expectations on Parties, as well as the conditions for the use of CDM credits for NDC achievement for the first NDC.

## 26. What should I know about Decision 7/CMA.4 “Guidance on the mechanism established by Article 6, paragraph 4, of the Paris Agreement”?

The Decision 7/CMA.4, “Guidance on the mechanism established by Article 6, paragraph 4, of the Paris Agreement”, adopted by the Parties to the Paris Agreement at the COP27 in Sharm-el-Sheik, Egypt, in 2022, essentially provides more guidance on the implementation of Article 6.4 Mechanism and in particular the transition from the Clean Development Mechanism to Article 6.4. It complements Decision 3/CMA.3, “Rules, modalities, and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement”.<sup>34</sup>

The decision aims to guide Parties and the Supervisory Body overseeing Article 6.4 implementation on issues such as crediting periods; activity designs; the transition process; and conditions for the use of CDM credits towards the first or first updated Nationally Determined Contributions; and processes for the implementation of dispositions related to the share of proceeds for adaptation, to the mandatory cancellation of ITMOs for the overall mitigation in global emissions, and for the levy meant to cover administrative expenses incurred on the management of Article 6.4. The decision also adds details on the governance of the subsidiary body: definitions, membership, codes of conduct, frequency and organization of meetings, etc.

<sup>34</sup> [UNFCCC.CMA.Decision 7/CMA.4.Guidance on the mechanism established by Article 6, paragraph 4, of the Paris Agreement, 2022.](#)

## 27. What are ITMOs?

**Internationally Transferred Mitigation Outcomes (ITMOs)** are emission reductions or removals (mitigation outcomes) that have been authorized by the relevant host country government for a particular use, in accordance with the framework provided by Article 6.2 of the Paris Agreement. An ITMO is a specific type of carbon credit, recognized only under Article 6 of the Paris Agreement. As with all carbon credits, one ITMO represents one ton of CO<sub>2</sub>e reduced or removed. Article 6.2 guidance specifies that ITMOs must be real, verified, and additional.

ITMOs can be issued by any carbon crediting mechanism, including international mechanisms (i.e., Article 6.4 mechanism), independent mechanisms (e.g., the Gold Standard or the Verified Carbon Standard), bilateral mechanisms (e.g., Japan's Joint Crediting Mechanism), or national mechanisms. As illustrated in Figure 4, the defining characteristic of an ITMO is that it is 'authorized' for one or more specific use cases by the host country government. Article 6.2 guidance specifies that ITMOs can be used for one or more of the following:

- » Use towards achievement of an NDC
- » International mitigation purposes (e.g., for use by international airlines under the CORSIA scheme)
- » Other purposes (e.g., voluntary climate commitments established by either public or private entities)

By authorizing ITMOs for use and international transfer, the host country is committing to applying corresponding adjustments once such ITMOs have been internationally transferred. See [What is a corresponding adjustment mechanism and why is it important?](#).

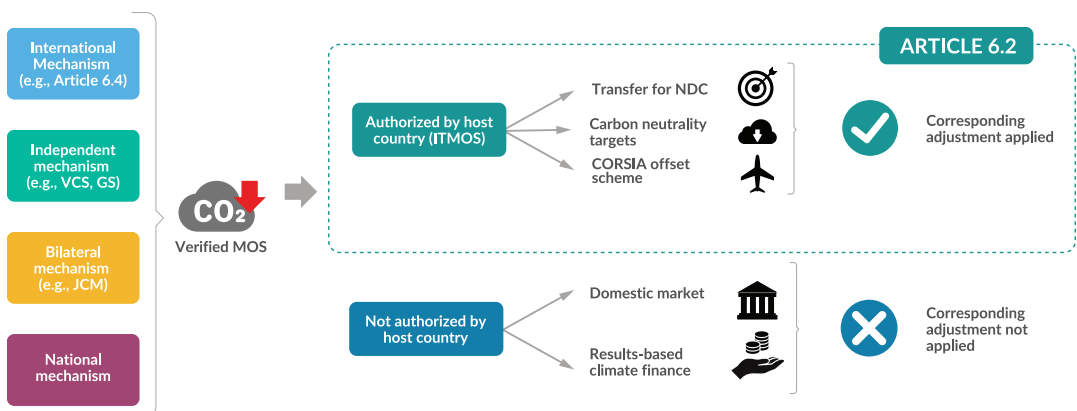


Figure 4. Process for ITMO generation and use. Source: GGGI.

## 28. What are mitigation contribution units (MCUs)?

A mitigation contribution unit (MCU) is one of two types of units that will be issued by Article 6.4 mechanism. MCUs are units that have not been authorized for use by the relevant host country, and which are therefore not subject to corresponding adjustments. The key distinction between MCUs and ITMOs is that ITMOs have been authorized for use and international transfer by the relevant host country and are therefore subject to corresponding adjustments upon international transfer.

MCUs issued by Article 6.4 Mechanism cannot be used to support achievement of another country's NDC. Instead, a buyer may wish to purchase MCUs to support mitigation efforts in the host country without making any corresponding offsetting claims. The COP27 guidance outlined a series of potential MCU uses that MCUs, including for results-based climate finance, domestic mitigation pricing schemes or domestic price-based measures.<sup>35</sup>

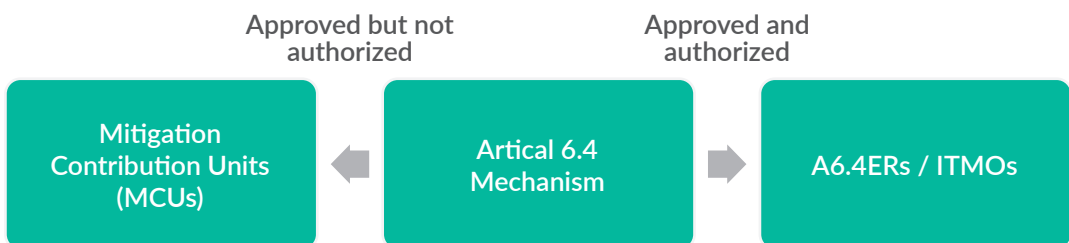


Figure 5. Types of units under Article 6. Source: Adapted from UNFCCC.

## 29. What is a corresponding adjustment mechanism and why is it important?

Corresponding adjustments are a new feature of carbon markets in the Paris Agreement period that is meant to avoid buyers and sellers both claiming mitigation outcomes (i.e. emissions reductions) from a given mitigation activity, which would result in double counting. Because all countries now have emission reduction targets (reflected in their NDCs), “corresponding adjustments” have been introduced to ensure that the mitigation outcomes (MOs) generated from an activity and transferred internationally are not counted towards the NDC of both countries (i.e., not double counted). In practice, applying corresponding adjustments means that the acquiring country subtracts the amount of ITMOs purchased from its reported emissions (i.e., counts these ITMOs towards its NDC target), while the transferring country adds back the amount of ITMOs transferred to its reported emissions. In other words, even though the emission reductions from an activity took place in the host country, it has

<sup>35</sup> UNFCCC, Regional Climate Week: Africa – Session 3: new or changed elements of Art 6.4 compared to the CDM, 2023.

sold ownership of these reductions to the buyer country. Corresponding adjustments are therefore a form of double-entry bookkeeping, intended to prevent the double counting of the same ITMO unit.

See Figure 6 for a simplified example of corresponding adjustments in practice.

The Decision 2/CMA.3, “Guidance on cooperative approach referred to in Article 6, paragraph 2 of the Paris Agreement specifies the conditions for the application of corresponding adjustments. Further guidance on methods to apply corresponding adjustments is expected to be developed in subsequent COPs.<sup>36</sup>

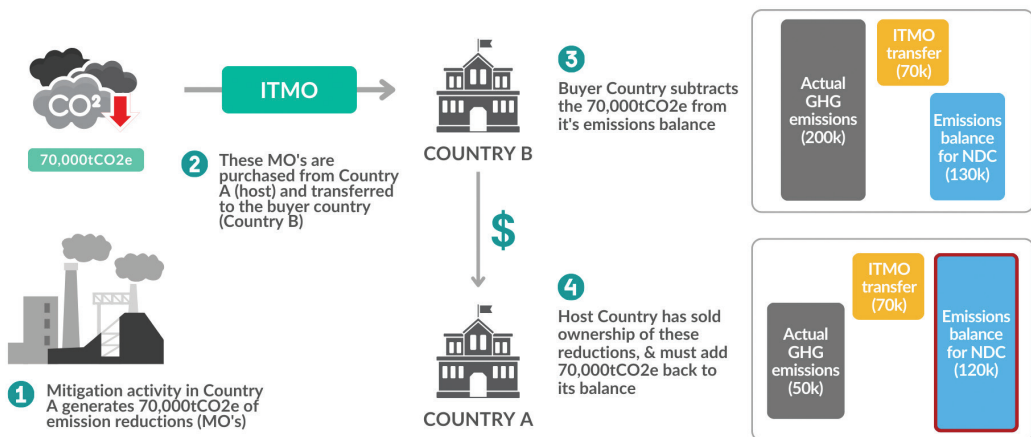


Figure 6. Simplified example of corresponding adjustment application. Source: GGGI.

## 30. Can emission reductions from REDD+ be traded under Article 6.2?

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is a mechanism that is considered “a collection of UN decisions, taken over many years, which regulate, measure, and incentivize forest conservation activities” according to Carbon Market Watch. In simple terms, if REDD+ activities meet the requirements of Article 6 (e.g. a forestry project generating emission removals), it is compatible under Article 6. However, there are some concerns over compatibility between REDD+ activities and Article 6, for several reasons<sup>37,38</sup>:

- » **Definitions:** definition of ITMOs have led experts to wonder whether REDD+ credits can be traded under Article 6.2. This is because some view “emission reduction from deforestation and forest degradation” as essentially “avoidance”, which is not covered under the definition of ITMOs (see [What should I know about Decision2/CMA.3, “Guidance on Cooperative approaches referred to in Article 6, paragraph 2 of the Paris Agreement”?](#)).

<sup>36</sup> WRI India, Uphill Task at Bonn and Baku Climate Negotiations: Finalize Carbon Market Rules, 2024.

<sup>37</sup> Wuppertal Institute, REDD+ and the Article 6 rulebook. Will there be Crediting of Forestry Activities under Article 6?, 2022.

<sup>38</sup> Carbon Market Watch, False Friends: Why UN REDD+ and Article 6 Carbon Markets are incompatible, Carbon Market Watch, 2024.

- » **Differences in requirements:** if emissions reductions from REDD+ activities are to be traded under Article 6.2, underlying activities will need to meet REDD+ as well as Article 6.2 requirements. More guidance is necessary to implement REDD+ activities that can be traded under Article 6.2, considering that requirements between both mechanisms are different. For instance, quantification requirements under REDD+ do not need to be aligned with IPCC guidance, whereas they must be for ITMOs. REDD+ does not have additionality requirements either.
  - » **Criticism of REDD+:** critics of the REDD+ framework have argued that REDD+ activities “have been repeatedly proven to not always lead to real, additional, and permanent emissions reductions, which make them ill-suited for carbon credits”. Some voluntary standards have, for this reason, decided to exclude REDD+ activities.
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# 5

## RECENT ARTICLE 6 DEVELOPMENTS

### 31. Is Article 6 operational? What happened at COP 28 with regards to Article 6?

The adoption of the “Article 6 rulebook” at COP26 in 2021 provided the basic framework for countries to engage in Article 6 cooperative approaches. The Article 6 rulebook stipulates how countries can authorize and transfer ITMOs, and the associated reporting requirements. A number of countries have already entered into Article 6.2 cooperative approaches based on **this guidance**, including Switzerland and host countries such as Ghana, Thailand, and Vanuatu. Ongoing UNFCCC negotiations with respect to Article 6.2 are focused on technical issues (such as standard reporting formats), and do not prevent countries from engaging in Article 6.2 cooperative approaches or establishing national frameworks for Article 6 participation.

**Article 6.4 Mechanism, however, is not yet operational.** Negotiations at UNFCCC level regarding the rules and modalities of Article 6.4 Mechanism are ongoing, and countries currently engaging in Article 6 cooperation therefore need to use existing market infrastructure to issue ITMOs. To date, both the Gold Standard and Verified Carbon Standard have issued ITMOs from mitigation activities being implemented in countries such as Rwanda and Malawi.

No CMA decisions were made on either Article 6.2 or Article 6.4 during COP28 in Dubai.<sup>39,40</sup> Despite the lack of progress on deciding technical aspects of Article 6 operationalization, countries are still able to engage in Article 6.2 cooperative approaches without further guidance from the CMA. For issues that still require decisions and guidance from the CMA, see [What is yet to be in place?](#).

### 32. Have there already been Article 6 transactions?

To date, five Article 6 cooperative approaches have been reported to the UNFCCC, in accordance with Article 6.2 reporting requirements. These five cooperative approaches are:

- » **Switzerland-Ghana: Promotion of climate smart agricultural practices for sustainable rice cultivation in Ghana.** This cooperative approach seeks to promote the adoption of Alternate Wetting and

<sup>39</sup> Gilbert + Tobin, *The UAE Consensus: key outcomes from COP28, 2023*.

<sup>40</sup> Climate Focus, *News from Dubai: Climate Focus's COP28 Client Brief, 2024*.



Drying for rice cultivation in Ghana, to reduce the volume of methane emissions that are generated from conventional agricultural practices that rely on flooding rice fields for the entire cropping season. It is expected to cover 78% of rice production areas in Ghana and reduce 1,125,655 tCO<sub>2</sub>e of GHG emissions by 2030.<sup>41</sup>

- » **Switzerland-Thailand: Operation of e-buses on privately owned, scheduled public bus routes in the Bangkok Metropolitan area.** This cooperative approach will replace the use of conventional buses (both diesel and natural gas) with e-buses on more than 100 new and existing privately operated bus routes within the Bangkok Metropolitan Area. The intervention is expected to reduce 612,000 tCO<sub>2</sub>e of GHG emissions by 2030, with Thailand providing authorization for up to 500,000 tCO<sub>2</sub>e of these reductions for international transfer to Switzerland to enhance the project's financial viability.<sup>42</sup>
- » **Switzerland-Vanuatu: Electrification of Vanuatu's Inhabited Islands through Solar Power ITMO Programme.** This cooperative approach will replace fossil fuel-based generators through the rollout of decentralized power installations across inhabited islands in Vanuatu. The intervention is expected to reduce 97,217 tCO<sub>2</sub>e of GHG emissions by 2030, while also enhancing energy access for remote communities.<sup>43</sup>
- » **Guyana: Emissions Reductions from Sustainable Management of Forests.** The cooperative approach promotes REDD+ activities. It promotes the maintenance of approximately 18 million hectares of forest cover, enabling emissions reductions of approximately 46.3 MtCO<sub>2</sub>eq. Of these total emissions reductions, Guyana will authorize up to 21 MtCO<sub>2</sub>eq as ITMOs. ART-TREES is the crediting mechanism being used to issue the credits generated under this cooperative approach. Unlike the three cooperative approaches between Switzerland and partner host countries, the Government of Guyana has authorized ITMOs under this cooperative approach for any use (i.e., for NDC purposes, for international mitigation purposes, or for other purposes).<sup>44</sup>
- » **Suriname: ITMOs were issued under Article 6.2 by converting REDD+ results.** This cooperative approach covers all forest-related emissions and removals in Suriname, a high forest, low deforestation country in South America. Under the cooperative approach, emissions reductions and removals recognized under the REDD+ framework may be authorized and issued as ITMOs. There is no specific buyer country or entity, and Suriname has stated that the ITMOs may be used for either NDC purposes or for other international mitigation purposes.<sup>45</sup>

<sup>41</sup> Ghana, Article 6 initial report, 2023.

<sup>42</sup> Thailand, Article 6 initial report, 2023.

<sup>43</sup> Vanuatu, Article 6 initial report, 2023.

<sup>44</sup> Guyana, Article 6 initial report, 2024.

<sup>45</sup> Suriname, Article 6 initial report, 2024.

The first Article 6 “transaction” occurred in January 2024, with the international transfer of ITMOs from Thailand to Switzerland as part of the Bangkok e-bus programme. In addition, the Swedish Energy Agency (on behalf of the Government of Sweden) entered into a Mitigation Outcome Purchase Agreement (MOPA) with a mitigation activity proponent in Ghana in November 2023. However, no ITMOs have been internationally transferred under that cooperative approach to date.

A number of emissions reductions units authorized under Article 6 have also been issued by both the Gold Standard and the Verified Carbon Standard (i.e., ITMOs issued by independent crediting mechanisms).

- » Gold Standard has issued authorized units for activities in Malawi and Rwanda. The units issued from Malawi are for a cookstoves project, with those units authorized for “other international mitigation purposes”. The units issued from Rwanda are also from a cookstoves project, with the units authorized for both NDC purposes and other international mitigation purposes.<sup>46</sup>
- » The Verified Carbon Standard has issued authorized units for cookstoves projects in Rwanda and Tanzania. For both activities, the emissions reductions units have been authorized by the respective host country for all purposes (i.e., for NDC use, international mitigation purposes, and other purposes).<sup>47</sup>

### 33. Which countries have already begun using Article 6 cooperation?

**A number of countries have either expressed interest in, or already commenced, participation in Article 6 cooperative approaches.**

Active buyer countries include:

- » **Switzerland:** Switzerland is an active buyer country that is seeking to purchase ITMOs for use towards its 2030 NDC targets. Switzerland has signed Article 6.2 bilateral agreements with a number of countries, including Ghana, Senegal, Vanuatu, Thailand, Georgia, Peru, Dominica, Malawi and Tunisia.<sup>48</sup> The Government of Switzerland has mandated the KliK Foundation to procure ITMOs on its behalf.
- » **Sweden:** The Government of Sweden has mandated the Swedish Energy Agency (SEA) to engage in Article 6 cooperation and procure ITMOs on its behalf. SEA provides funding for Article 6 readiness activities to several organizations, including GGGI, the World Bank, UNDP, and the Asian Development Bank. Sweden has entered into MOUs or bilateral agreements for Article 6 with countries including Ghana, Dominican Republic, and Nepal. Sweden is not purchasing ITMOs for use towards its NDC targets. Instead, Sweden seeks to use

<sup>46</sup> Gold Standard, Beyond National Commitments: Rwanda, Atmosfair and Gold Standard Launch First Carbon Credit Aligned with Paris Article 6, 2023.

<sup>47</sup> Verra, Verra Announces First Application of Article 6 Authorized Labels to VCUs from a Cookstove Project in Rwanda, 2023.

<sup>48</sup> Federal Office for the Environment, Helvetic Federation, Bilateral climate agreements, 2024.

emissions achieved internationally (i.e., ITMOs) to help meet its net-zero targets.

- » **Norway:** Like Sweden, Norway is not purchasing ITMOs for use towards its NDC targets. Instead, Norway is seeking to purchase ITMOs for use towards its net-zero targets. Norway is focusing its Article 6 support on jurisdictional-scale “policy” crediting approaches, however, is also potentially open to purchasing ITMOs from smaller scale project-level activities.
- » **New Zealand:** New Zealand’s NDC targets a 50% reduction in GHG emissions by 2030 compared to a 2005 baseline. The New Zealand government is exploring different options for achieving this target, including potentially through cooperative approaches under Article 6 of the Paris Agreement.
- » **Singapore:** Singapore has signed MOUs for Article 6 cooperation with several countries, including Cambodia, Indonesia, Mongolia, Vietnam, Sri Lanka, Kenya, Morocco, Rwanda, and Fiji. Singapore is seeking to purchase ITMOs for use towards its NDC targets. Moreover, Singapore-based companies are able to meet up to 5% of their carbon tax obligations through the use of ITMOs.
- » **Republic of Korea (ROK):** The ROK has signaled its intention to use ITMOs to meet its 2030 NDC targets. To achieve these targets, the ROK has estimated that it needs to purchase approximately 37.5 million ITMOs by 2030. Korea has signed MOUs or bilateral agreements with several countries, including Vietnam and Uzbekistan.
- » **Japan:** Japan has also signaled its intention to use ITMOs to help meet its 2030 NDC targets. Unlike other countries, Japan is using its own crediting mechanism system (the Joint Crediting Mechanism) to develop projects and generate and issue emissions reduction credits. Under the Joint Crediting Mechanism system, Japan provides upfront investment support for projects that utilize Japanese technologies, and receives a corresponding proportion of emissions reductions generated by the project as authorized units (i.e., ITMOs).

Another major source of demand for ITMOs will be from international airlines. Under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), international airlines must purchase ITMOs to offset emissions that exceed 85% of what they emitted in 2019. The first phase of the scheme began in 2024, and runs until the end of 2026. Recent analysis has estimated that demand for ITMOs under CORSIA could be 100 million credits by 2027.<sup>49</sup>

Active host countries include:

- » **Ghana:** Ghana has entered into bilateral agreements with several buyer countries, including Switzerland and Sweden. The country has established a framework for international carbon markets, and

<sup>49</sup> S&P Global, Demand for CORSIA carbon credits unlikely to match supply until 2030; Abatable, 2024.

<sup>50</sup> Ghana, Ghana’s framework on international carbon markets and non-market approaches, 2024.

<sup>51</sup> Rwanda, National Carbon Market Framework, 2024.

authorized several activities for Article 6, including an Alternate Wetting-Drying rice cultivation project.<sup>50</sup>

- » **Rwanda:** Rwanda has established a National Carbon Market Framework, and provided Article 6 authorization for several cookstoves projects under the Gold Standard and the Verified Carbon Standard.<sup>51</sup> Article 6 cookstoves projects have not been developed under a specific cooperative approach with a buyer country. Instead, the units generated by those projects have been authorized for “other purposes” or “international mitigation purposes”, allowing them to be purchased by either countries, international airlines under CORSIA, or other corporate entities seeking to voluntarily acquire ITMOs.
- » **Malawi:** The Government of Malawi has recently approved the Malawi Carbon Trading Regulatory Framework. Like Rwanda, Malawi has provided authorization for credits issued by the Gold Standard for several cookstoves projects.
- » **Vanuatu:** Vanuatu has entered into a bilateral agreement for Article 6 cooperation with Switzerland, and provided authorization for credits generated by a solar PV project implemented on remote islands. The Government of Vanuatu has also received support to develop and implement a governance framework for Article 6, however the status of this framework is not currently known.
- » **Tanzania:** Tanzania released National Carbon Trading Guidelines in November 2022, which were subsequently amended in November 2023.<sup>52</sup> In addition to the development of a regulatory framework, Tanzania has provided authorization for credits generated from several cookstoves projects implemented in the country and registered under the Verified Carbon Standard.
- » **Thailand:** In January 2024, Thailand transferred ITMOs to Switzerland, marking the first such international transfer of ITMOs under an Article 6 cooperative approach. The ITMOs were generated from the Bangkok e-bus programme. However, Thailand is currently revising its governance framework for Article 6 (including relevant laws, strategies, and operational guidelines), and does not expect to provide further authorizations until such revisions are finalized.
- » **Guyana:** In 2024, the Government of Guyana authorized up to 7.14 million emissions reduction or removal units as ITMOs. These units, achieved from REDD+ activities in the country, were issued by the ART-TREES independent crediting mechanism, and were authorized by the Government of Guyana for all uses (i.e., for NDC purposes, international mitigation purposes, or other purposes).

There are also a number of host countries that have established governance frameworks for Article 6 engagement, but have not yet authorized ITMOs generated by projects implemented in their country. These countries

<sup>52</sup> [Tanzania, Control and Management of Carbon Trading Regulations, 2023.](#)

include:

- » **Cambodia:** In January 2024, the Government of Cambodia approved the Operations Manual for the Implementation of Article 6 of the Paris Agreement on Climate Change in Cambodia.<sup>53</sup> The manual outlines the eligibility criteria for Article 6 projects, and the process for project developers to submit requests for authorization.
- » **Zambia:** In 2023, the Government of Zambia released [Part I](#) of its Carbon Market Framework. Part I includes the guidelines for the submission and evaluation of proposed mitigation activities under Article 6.<sup>54</sup>

In addition, a number of countries such as Kenya, Cote d'Ivoire, Nepal, Morocco, Senegal, and Indonesia are currently developing governance frameworks for carbon markets and Article 6, and are all expected to begin engaging with Article 6 carbon market in the coming years.

GGGI is providing or has provided Article 6 technical support to a number of host countries, including Cambodia, Thailand, Senegal, Zambia, Cote d'Ivoire, Colombia, Morocco, Indonesia, Nepal, Vietnam, and Pakistan.

## 34. What is yet to be in place?

**As noted in [Is Article 6 operational?](#), previous CMA decisions allow for the implementation of Article 6.2 cooperative approaches but some technical issues remain outstanding. Article 6.4 Mechanism, to the disappointment of many observers of international carbon markets, has not yet been operationalized. The operationalization of Article 6.4 is dependent upon further guidance from the CMA, which observers hope will be provided at COP29 in 2024.**

Outstanding issues for Article 6.2 are listed and briefly described below:

- » **Scope and definition of cooperative approaches:** Disagreement remains between countries on whether cooperative approaches have to involve two or more parties or could be implemented by just one party (i.e., whether two countries need to be involved in the transfer of ITMOs, or if a host country can unilaterally transfer ITMOs without the participation of another country). Those in favor of allowing unilateral cooperative approaches argued that such cooperative approaches (i.e., implemented by just one party) are possible under the existing Article 6.2 guidance, as per guidance on the authorization and transfer of ITMOs. Indeed, countries such as Malawi, Rwanda, and Guyana have authorized ITMOs unilaterally, for use towards any of the purposes enumerated in Article 6.2 guidance.
- » **Timing and revocation of ITMO authorizations:** Host countries are generally concerned with retaining some flexibility regarding the ability to revoke authorization of ITMOs, to minimize potential

<sup>53</sup> Cambodia, [Operations Manual for the Implementation of Article 6 of the Paris Agreement on Climate Change in Cambodia, 2024](#).

<sup>54</sup> Zambia, [Guidelines for the Submission and Evaluation of Proposed Mitigation Activities under Article 6 of the Paris Agreement, 2023](#).

“overselling” risks associated with early or ambitious authorization of ITMOs. On the other hand, acquiring countries that represent investors have argued for early and strong authorizations that cannot be revoked by referring to a change of circumstances. Such early authorization provides greater certainty for investors. A potential compromise discussed by some countries is the potential to revoke authorization before the transfer of ITMOs in exceptional circumstances, but to prevent revocation after ITMOs have been first transferred. This continues to be a topic of discussion at CMA level.

- » **Common processes and templates for authorization:** Some countries have argued for more prescriptive processes for each authorization defined under the A6.2 and standardized format for the authorization. Other countries have preferred to allow flexible voluntary processes and format for authorization.
- » **Registry functionality:** A further issue that remains under negotiation at the CMA is the role of the UNFCCC-provided international registry. Some parties have argued that it should only be able to extract data from other registries (i.e., serve as a database), while other parties argue that it should also have added functionality to transact ITMOs (i.e., serve as a transactional registry) and be interoperable with Article 6.4 registry. The question of interoperability (between national and international registries, and between national and 6.4 registries) is yet to be answered.

Outstanding issues for Article 6.4 are listed and briefly described below:

- » **Emission removals:** Strong disagreements between negotiators prevented the adoption of a decision on the treatment of emission removals under Article 6.4. While Article 6.4 Supervisory Board put forward recommendations on removals ahead of COP28, some parties argued that such recommendations failed to adequately monitor removals (particularly in the post-crediting period), did not define “reversal”, had gaps with respect to the permanence of removals, and did not refer to social and environmental safeguards and human rights. The Coalition for Rainforest Nations also noted that all forestry projects should apply the REDD+ guidance, and be jurisdictional in nature (i.e., the boundaries of a REDD+ activity are jurisdictional – national or subnational – as opposed to project-based REDD+ activities, which are smaller in scale). For more information on jurisdictional REDD+, see [this blog](#).
- » **Methodology development:** Due to the lack of a decision on emission removals, no decision was adopted by the CMA with respect to Article 6.4. However, parties agreed to allow Article 6.4 Supervisory Body to continue its work on developing recommendations on methodologies.

# 6

## PREPARING FOR ARTICLE 6

### 35. What requirements must countries meet to participate to Article 6?

There are two categories of requirements that countries must meet to be able to participate in Article 6 “cooperative approaches” as per Article 6.2 guidance. The two categories of Article 6 requirements are:

#### 1. Participation requirements

The participation requirements are specified in Article 6.2 guidance – specifically paragraphs 4 and 29 of Decision 2/CMA.3. These requirements are listed below, with a brief description of what Lao PDR must do to meet (or continue meeting) each requirement.

- » **Be a Party to the Paris Agreement and prepare, communicate, and maintain an NDC:** Lao PDR is a Party to the Paris Agreement. It must continue to prepare, communicate, and maintain an NDC in accordance with Article 4, paragraph 2 of the Paris Agreement.
- » **Have in place institutional arrangements for the authorization and tracking of ITMOs:** Establishing institutional arrangements for the authorization and tracking of internationally transferred mitigation outcomes (ITMOs) requires that Lao PDR designates specific institutions to perform these functions. Such designation could be provided through a decree, and then operationalized through a set of operational guidelines.
- » **Provide the most recent national inventory report:** As specified in Article 13 of the Paris Agreement, countries must report on their greenhouse gas (GHG) emissions by submitting a national GHG inventory to the UNFCCC. It is a requirement of Article 6 engagement that participating parties have provided their most recent national inventory report.
- » **Ensure its participation contributes to the implementation of its NDC and long-term low-emission development strategy, and the goals of the Paris Agreement:** To ensure that participation supports the achievement of Lao PDR’s NDC and LT-LEDS (once approved), a robust Article 6 strategy should be developed.
- » **Have, or have access to, a registry for the purpose of tracking:** As noted above, countries must establish arrangements for tracking ITMOs. Performing this function requires having access to a registry

system. Countries can choose to utilize existing registry systems (e.g., those provided by the UNFCCC or by independent crediting mechanisms).

## 2. Basic/tactical decisions

Once Lao PDR has met the participation requirements, it must also make several basic or tactical decisions. These decisions are based on the information that must be communicated in Article 6 initial report, which is to be submitted by Lao PDR to the UNFCCC “no later than the authorization of ITMOs from a cooperative approach” (Decision 2/CMA.3, paragraph 18). Making such decisions is therefore a requirement of Article 6 participation. These decisions are summarized below:

- » **Choosing units and accounting approaches:** Lao PDR must quantify its NDC mitigation targets in tCO<sub>2</sub>eq (or provide a methodology for doing so, when non-GHG metrics are used), communicate an ITMO metric (likely to be tCO<sub>2</sub>eq), and define an accounting approach for single-year or multi-year targets.
- » **Choosing the timing of authorizations:** The authorization of ITMOs for a specific use can be provided either prior to or following the implementation of a mitigation activity. Providing such authorization is the trigger for submission of an initial report.
- » **Defining which uses of ITMOs to authorize:** Lao PDR will need to communicate the use for which ITMOs have been authorized in the initial report. It must therefore decide whether to provide authorization for one, several, or all use cases.
- » **Defining an approach to Overall Mitigation in Global Emissions (OMGE) contributions:** While Article 6.4 rules require contributing to adaptation and delivering OMGE, this is only “strongly encouraged” under Article 6.2 guidance. If such contributions are made, this must be described in the initial report.

## 36. Is there general guidance on how host countries should prepare themselves for Article 6?

The preparations needed for host countries to engage in Article 6 can seem challenging, especially as the dispositions of the Paris Agreement and the Article 6 rulebook are relatively new and for some of them still under development. See [Is Article 6 operational? What happened at COP 28 with regards to Article 6?](#) and [What is yet to be in place?](#) **International organizations have therefore developed guidance for host countries to increase their readiness:**

- » GGGI’s technical guidance on Governance Models for Host Country Engagement in Article 6. The guidance highlights the requirements in terms of participation, infrastructure and governance, and reporting

<sup>55</sup>GGGI, *Guidance on Governance Models for Host Country Engagement in Article 6*, 2022.



- and offers solutions in terms of possible arrangements.<sup>55</sup>
- » The Program for Supporting Preparedness for Article 6 Cooperation (SPAR6C), financed by the German Government and led by GGGI with a consortium of partners (Carbon Limits, GFA Consulting Group, Kommunal Kredit, UN Environment Programme Copenhagen Climate Centre) has developed specific guidance for host countries, including guides on: institutional frameworks under Article 6, developing an Article 6 host party strategy and Screening and developing Article 6 activities.<sup>56</sup> Additional guidance will be prepared, which will for instance cover the integration of carbon markets and other carbon pricing instruments.
  - » The NDC Partnership has prepared an Article 6 Readiness Toolkit which presents readiness through building blocks: strategic considerations; legal foundations and governance; institutional arrangements; operational procedures; and infrastructure.<sup>57</sup>
  - » The World Bank's Climate Warehouse prepared a guidance entitled Country processes and institutional arrangements for Article 6 transactions, which proposes institutional and governance functions and options for host countries.<sup>58</sup>
  - » Although specific to West Africa, the West Africa Climate Alliance Article 6 Readiness Blueprint identifies building blocks that are applicable to most host countries and similar to those presented by GGGI, the NDC Partnership, and the World Bank: NDC integration; Article 6 policy; Institutional Frameworks; Tracking, Recording, Accounting, and Reporting.<sup>59</sup>
  - » ADB published guidance to help countries to develop strategies on carbon markets under the Paris Agreement.<sup>60</sup> The guidance reviews the key strategic elements and operational requirements that are considered essential to develop access and participation to carbon markets for NDC achievement and broader policy goals.

Countries are encouraged to develop Readiness and Needs Assessments (RNAs) as preparations differ from one country to another. RNAs can provide national policymakers with a mapping of eligibility against the participation, administration, and reporting requirements of the Paris Agreement. These assessments can also contain legal and policy reviews; institutional gaps; capacity development needs, and already explore potential strategic decisions on priority sectors for voluntary cooperation. Such assessments have been undertaken in Zambia, Colombia, Pakistan, or Thailand under the SPARC program.

<sup>55</sup> GGGI, [Supporting Preparations for Article 6 Cooperation. Toolbox for Article 6](#).

<sup>57</sup> NDC Partnership, [Article 6 Readiness Toolkit](#), 2024.

<sup>58</sup> World Bank, [Country processes and institutional arrangements for Article 6 transactions](#), 2020.

<sup>59</sup> West Africa Climate Alliance, [Blueprint for Article 6 Readiness in member countries of the West African Alliance](#), 2022.

<sup>60</sup> ADB, [National Strategies for Carbon Markets under the Paris Agreement](#), 2023.

### 37. What legal, policy, and institutional changes are usually needed?

Governance changes required vary from one country to another, and this is why Readiness and Needs Assessments are recommended to host countries and international organizations providing technical assistance to them. However, looking at countries progressing on their Article 6 Readiness, one can identify macro-level similarities: legal updates; policy design; and infrastructural developments.

- » Developing regulations and procedures (depending on the country's legal system) that identify critical institutional responsibilities and functions and processes to authorize, transfer, track, and report on the international trading of mitigation outcomes under Article 6. In many countries, this can include the development of new offices or of new inter-ministerial policy and/or technical committees, where no existing entity was suitable to take on new functions related to carbon markets; of new responsibilities for existing departments; and of new collaborative processes between central ministries and line ministries. See [As of September 2024, what was Lao PDR doing to prepare for Article 6 cooperation?](#)
- » Developing policies and strategies is a common development among host countries. Countries can identify their mitigation ambitions through their Nationally Determined Contributions (NDCs) and their Long-Term Low-Emission Development Strategies (LT-LEDs) and from them, identify sectors and activities for voluntary cooperation, based on mitigation costs or the opportunities of technological transfers and development co-benefits. See [What is the role of an Article 6 strategy and what should it look like?](#) and [What kind of information and data do you need to prepare an Article 6 Strategy?](#)
- » There are often infrastructural developments: all countries must have an accounting system (for ITMOs) and a registry (to track projects). Many countries have decided to develop additional digital databases and platforms to support better planning, reporting, and transparency. See [What is the role for national registries and what kind of solutions are available?](#)

### 38. What is the role of an Article 6 strategy and what should it look like?

The development of a national strategy is the best way to maximize benefits and minimize risks for a host country when engaging in Article 6. Potential strategic benefits that Article 6 holds for host countries includes economic benefits (i.e., additional finance for mitigation actions); sustainable development co-benefits and support for SDG implementation; and

technology transfers.

There are also risks associated with Article 6 engagement. The key risk is that a host country “oversells” mitigation outcomes and therefore fails to achieve its NDC mitigation targets. The overselling risk is higher when ITMOs are transferred from the following types of activities:

- » Low-cost activities that are part of (or could be part of) the unconditional NDC;
- » Non-additional activities;
- » Mitigation activities not captured in the national GHG inventory;
- » Mitigation activities outside the scope of the NDC.

An Article 6 strategy provides a blueprint for how to use carbon markets in a way that safeguards environmental integrity, promotes sustainable development, and promotes greater ambition in climate mitigation. While there is no fixed template for an Article 6 strategy, it should at a minimum include:

- » An identification of opportunities for Article 6 (e.g., priority sectors or technologies). This could be as simple as indicating that Article 6 will be leveraged to support the implementation of conditional NDC actions.
- » Authorization criteria and conditions – i.e., the criteria used by a host party when deciding to authorize ITMOs for use under Article 6.<sup>61</sup>

## 39. What are common measures found in Article 6 strategies?

**Each country’s Article 6 strategy and governance framework reflects its unique national circumstances. Therefore no single design approach exists.** Moreover, Article 6 guidance is deliberately high-level and provides flexibility to countries regarding their engagement with the still-evolving international carbon market. Host countries need to decide among various options when designing an Article 6 strategy and governance framework. Four key areas in which decisions are expected are:

1. Deciding which activities are eligible for authorization as ITMOs;
2. Share of mitigation outcomes reserved for domestic use;
3. Carbon crediting mechanisms eligible to issue MOs that can be authorized as ITMOs;
4. Fee structure.

The table below provides more details on options across these four areas.

<sup>61</sup>GGGI, Supporting Preparations for Article 6 Cooperation: Developing an Article 6 host party strategy, 2023.

**Table 1. Frequent elements found in Article 6 strategies. Source: GGGI.** <sup>62</sup>

<p><b>Deciding which activities are eligible for authorization as ITMOs</b></p>	<p>A key component of developing an Article 6 strategy is deciding which types of mitigation activities are eligible to generate ITMOs for use under Article 6 cooperative approaches.</p> <p>Countries have tended to set eligibility criteria in two main ways:</p> <ol style="list-style-type: none"> <li><b>1. Through a strategic list of activities</b> – e.g., high-abatement cost activities that require additional financing;</li> <li><b>2. According to an activity’s place in the NDC</b> (i.e., whether it is a conditional or unconditional NDC measure) – e.g., determining that all activities listed in the conditional NDC are eligible for authorization. Deciding according to this method requires a solid NDC which distinguishes between unconditional and conditional targets based on mitigation potentials, relative costs, and country’s financing constraints.</li> </ol>
<p><b>Share of mitigation outcomes reserved for domestic use</b></p>	<p>To minimize the risk of overselling ITMOs, host countries can apply parameters to authorizations:</p> <ul style="list-style-type: none"> <li>• One parameter is to reserve a share of mitigation outcomes generated by a mitigation activity for use towards domestic NDC achievement. In such situations, an activity proponent requesting an authorization would need to present an analysis of the mitigation activity’s total emissions reductions. The host country would then authorize only a specified portion of the total mitigation outcomes generated by the activity, using the remainder to achieve its NDC.</li> <li>• An important decision for the host country is to determine what proportion of mitigation outcomes must be reserved for domestic use. Ghana has specified that all activities must reserve 1% of mitigation outcomes for domestic use, while Indonesia provides a range of between 10-20% for mitigation activities that are included in the NDC.</li> </ul>
<p><b>Carbon crediting mechanisms eligible to issue MOs that can be authorized as ITMOs</b></p>	<p>Article 6 guidance provides flexibility regarding the crediting mechanism through which mitigation outcomes can be authorized as ITMOs are issued.</p> <p>Credits issued by international (e.g., Article 6.4 mechanism), bilateral (e.g., Japan’s Joint Crediting Mechanism), national (e.g., Thailand’s national crediting system), or independent (e.g., the Gold Standard or Verified Carbon Standard) mechanisms may be authorized as ITMOs by a host country. This flexibility to issue ITMOs from different standards and against different methodologies contrasts with the Kyoto Protocol’s Clean Development Mechanism (CDM), where only the CDM itself could issue credits.</p>

<sup>62</sup>GGGI, *Implementing Article 6 of the Paris Agreement: Options for governance frameworks for host countries*, 2023.

	<p>To date, ITMOs have been issued through national mechanisms (such as in the case of cooperative approaches implemented in Thailand and Ghana) and independent mechanisms (for cookstoves projects in Rwanda, Malawi, and Tanzania, which have issued authorized units via both the Gold Standard and the Verified Carbon Standard). Host countries have therefore generally provided flexibility regarding which carbon crediting mechanisms are eligible to issue mitigation outcomes that can be authorized as ITMOs.</p>
<p><b>Fee structure</b><sup>63</sup></p>	<p>A fee structure for Article 6 is relevant for three reasons:</p> <ol style="list-style-type: none"> <li>1. Managing and covering administrative costs incurred by the host country for participating in Article 6</li> <li>2. Determining appropriate benefit-sharing arrangements (i.e., benefits beyond the compensation for administrative costs incurred, for instance for reinvestments in climate action).</li> <li>3. Contributing to mitigate overselling risks.</li> </ol> <p><b>Managing and covering administrative costs incurred by the host country for participating in Article 6</b></p> <p>An administrative fee is designed to compensate the government for the costs of administering Article 6. Administrative fees may include:</p> <ul style="list-style-type: none"> <li>• <b>Approval fee:</b> covering all administrative tasks related to due diligence matters before the mitigation activity takes place</li> <li>• <b>Registration fee:</b> covering the administrative costs associated with reviewing project documentation necessary to formally enroll the project or entity in the carbon market program</li> <li>• <b>Registry (or listing) fee:</b> covering administrative costs associated with maintaining the carbon market infrastructure</li> <li>• <b>ITMO authorization fee:</b> covering costs of all administrative matters related to ITMO transactions</li> </ul> <p><b>Benefit-sharing</b></p> <p>A host country may also decide to establish levies that seek to take advantage of the benefits generated by the carbon activity. Possible types of benefit-sharing levies include:</p> <ul style="list-style-type: none"> <li>• <b>Tax:</b> to contribute to Government revenues and climate and development investments;</li> <li>• <b>Adaptation levy:</b> setting aside a portion of revenue to finance adaptation activities. This is mandatory under Article 6.4 mechanism, and strongly encouraged for cooperative approaches under Article 6.2;</li> <li>• <b>Overall Mitigation in Global Emissions (OMGE):</b> cancellation of a portion of emissions reduction units to support achievement of OMGE. This is mandatory under Article 6.4 mechanism, and strongly encouraged for cooperative approaches under Article 6.2.</li> </ul>

<sup>63</sup> Climate Finance Innovators, *Setting an Article 6 Levy Structure in Senegal: A practical guide to administrative fees and benefit-sharing levies under Article 6 of the Paris Agreement*, 2024.

### Mitigate overselling risks

In addition to the sharing of mitigation outcomes or the limiting of crediting periods to mitigate the risk of overselling ITMOs, a host country may decide to charge a levy on ITMO transfers. The proceeds of this levy could be placed in a reserve fund that is used to address any NDC shortfalls (for example, by financing mitigation activities in a specific sector).

## 40. What kind of information and data do you need to prepare an Article 6 Strategy?

**For a host country such as Lao PDR, an Article 6 Strategy helps to define and communicate specific measures that can help to make Article 6 cooperation a mechanism to support the country's NDC achievement and broader climate and development goals.**

As mentioned in [What are common measures found in Article 6 strategies?](#), a strategy usually contains decisions to: (1) decide which activities are eligible for authorization as ITMOs; (2) set a share of mitigation outcomes reserved for domestic use; (3) identify which carbon crediting mechanisms are eligible to issue MOs that can be authorized as ITMOs; (4) set a fee structure to cover administrative costs and facilitate reinvestment in climate and development objectives.

In order to make these decisions, data and information are needed: among other things, policymakers need to be aware of the relative costs of mitigation (high-hanging fruits go for trading; while low-hanging fruits are for domestic finance); of the financial and technological capacities of the country to achieve NDC targets; of expected development co-benefits across sectors and mitigation activities (e.g. economic development, green job, rural development, etc.); of scaling-up and replication potential; of the expected costs of administering carbon markets participation.

**In order to clearly assess opportunities from Article 6 and make evidence-based decisions, several diagnostics can be developed, such as:**

- » **A Technology and Needs Assessment**, which GGGI conducted in Lao PDR in 2022. It can inform technology transfer needs for the country. UNEP developed methodologies for the preparation of these assessments.<sup>64</sup>
- » **A Marginal Abatement Cost Curve analysis**, which would map emissions reductions potential by sector/ activity against their financial costs. This can help a country to identify conditional vs. unconditional targets by providing the Government with a clear picture of the cost-efficiency of mitigation investments. UNDP undertook this type of work in Sri Lanka, for example.<sup>65</sup>

<sup>64</sup> [UNEP Technology Needs Assessment Methodology](#)

<sup>65</sup> [UNDP Updated Energy Sector's Marginal Abatement Cost Curve, 2021](#)

- » **A cost-benefit analysis of fees, levies, and charges on carbon markets**, which can help to identify optimal levels to ensure both attractiveness and revenue generation. A study was undertaken looking at African countries.<sup>66</sup>
- » **A clear review of national development priorities** as contained in the national development plan and relevant sectoral strategies.
- » **A clear review of international market trends** to understand the drivers and characteristics of the international demand for emissions reductions.

# 7

## ADMINISTERING ARTICLE 6

### 41. What are the different types of carbon pricing instruments?

**Administering Article 6 includes the management of the following tasks, in addition to those related to meeting participation requirements of the Paris Agreement** (see [What requirements must countries meet to participate to Article 6?](#)):

- » **Authorization:** developing a strategy (authorization criteria); developing procedures to review applications based on the authorization criteria; provide authorization (and rejection) letters; develop an authorization database.
- » **Transfer:** developing internal procedures for the transfer of Internationally Transferred Mitigation Outcomes; providing a letter approving the transfer.
- » **Accounting:** developing and running a national registry and accounting system; tracking corresponding adjustments.
- » **Reporting:** preparing and communicating regular reports to the UNFCCC (including the national GHG inventory and the Biennial Transparency Report); calculating emissions balance.
- » **Financial management:** depending on the institutional set-ups selected and strategic objectives, the Government may also decide to impose fees and charges on project developers (e.g. at the registration stage) to generate revenues to cover administrative costs or to reinvest in climate action.<sup>67</sup>

<sup>66</sup> Climate Finance Innovators, *Setting an Article 6 Levy Structure in Senegal: A practical guide to administrative fees and benefit-sharing levies under Article 6 of the Paris Agreement*, 2024.

<sup>67</sup> GGGI, *Supporting Preparations for Article 6 Cooperation: Developing an Article 6 host party institutional framework*, 2023.

These functions, and the institutional bodies that generally perform them, are illustrated in Figure 7.

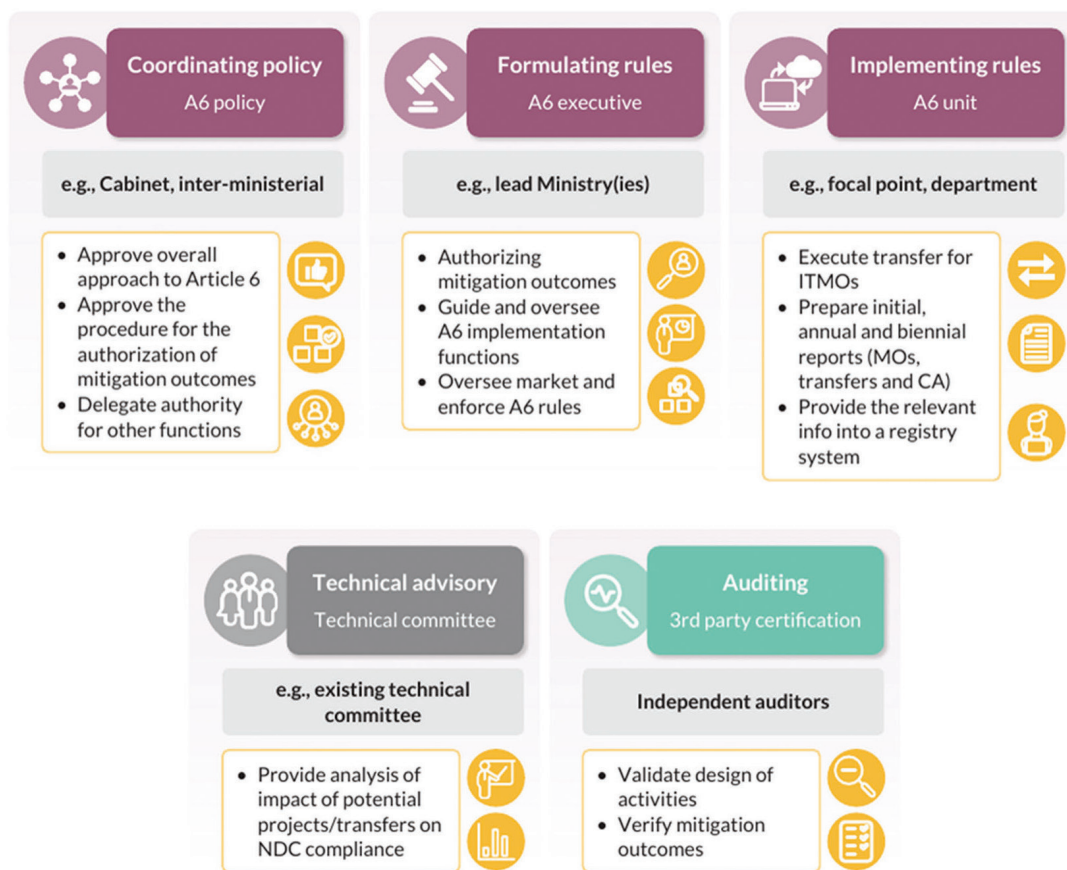


Figure 7. Government functions to be performed for Article 6. Source: GGGI.

The Program for Open and Sustainable Carbon Markets in the Lao PDR, implemented by GGGI, supports the development of these institutional processes.

## 42. What is the role of national registries and what kind of solutions are available?

Participation in international carbon markets, including under Article 6, requires host countries to have certain infrastructure in place. Such infrastructure can be categorized into four types:

- » **Greenhouse gas (GHG) inventory:** an inventory that records physical GHG emissions and removals as required for monitoring national emissions targets and reporting to the UNFCCC in accordance with Article 13 of the Paris Agreement.



- » **Data management system (DMS):** a database that records information about emissions reduction projects, methodologies and tools, permissions required for project operation, host country issued documents, stakeholder engagement documentation, monitoring reports, etc. The information captured in the DMS is reported in Article 6 initial report and in the biennial transparency report.
- » **Register:** a database that tracks information related to the use and transfer of individual emissions reduction units (i.e., MOs and ITMOs). Information tracked in the register might include the vintage of the units, the identity and location of the project from which units were issued, the project developer, and verification details. A register could also be used to track transfers of ITMOs to an acquiring country or entity to support meeting Article 6 reporting requirements.
- » **Transaction registry:** a database that has all the features of a register, but with the added functionality to transfer carbon units between multiple account holders both within the registry (i.e., internal transfer), and/or the functionality to transfer carbon units to another transaction registry (i.e., external transfer).<sup>68,69</sup>

Article 6.2 guidance specifies that countries engaging in Article 6 cooperative approaches must have, or have access to, a registry for the purpose of tracking information related to ITMOs (Decision 2/CMA.3, para. 29). Such information includes the authorization, first transfer, subsequent transfers, acquisition, and use of ITMOs. However, host countries have several options for meeting this requirement (see Figure 8):

1. **Create a new national registry**
2. **Utilize a third-party (private) registry**
3. **Utilize the UNFCCC-provided “international registry”**

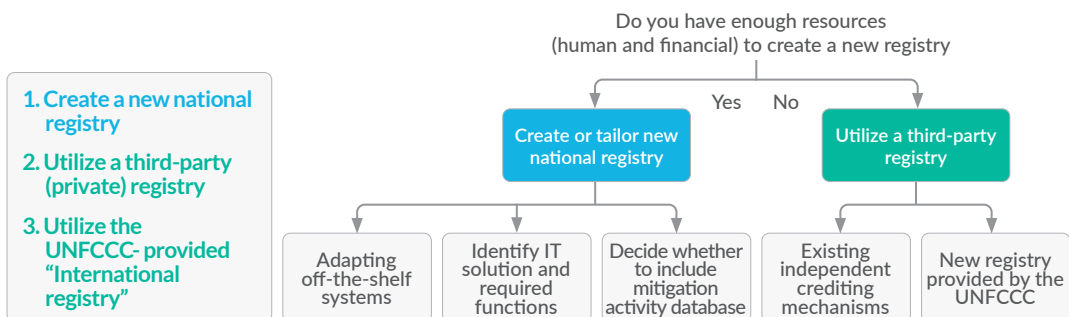


Figure 8. Host country registry options. Source: GGGI.

<sup>68</sup> World Bank, *Infrastructure to Meet Reporting Requirements under Article 6, Article 6 Approach Paper Series*, 2022.

<sup>69</sup> GGGI, *Supporting Preparations for Article 6 Cooperation: Developing an Article 6 host party institutional framework*, 2023.

For many smaller host countries, Option 1 is unlikely to be a cost-effective option, given the high resource requirements for developing and maintaining a national registry system. The UNFCCC is developing an “international registry” that will allow host countries to meet Article 6 tracking requirements and facilitate reporting to the UNFCCC, and will be provided free of charge. However, the international registry is not yet operational, and countries are not expected to be able to access this until late 2024 at the earliest.

In the meantime, Option 2 will allow countries to track information related to authorized units and report to the UNFCCC. The Gold Standard has already developed procedures to track the information countries require to fulfill Article 6 tracking and reporting requirements, and a number of host countries (such as Cambodia) have indicated their intention to utilize this option pending the operationalization of the UNFCCC-provided international registry.

GGGI is also supporting the Government of Lao PDR to design and implement a national registry system.

### 43. What reports are expected from countries engaging in Article 6?

**Under Article 6, the Government is expected to prepare 3 reports to the UNFCCC which require the development of capacity, infrastructure (registry, accounting system), and established processes to produce, analyze, and share data (on emissions reductions and ITMOs).**

- » **Initial report:** an initial report must be submitted to the UNFCCC no later than the authorization of ITMOs from a cooperative approach. This report aims to summarize the fulfillment of participation requirements; information on the quantification of NDC targets and ITMOs; the method for the application of corresponding adjustments; and the description of the cooperative approaches. For each new cooperative approach, an updated initial report must be submitted to the UNFCCC. Several countries have already submitted initial reports, which are available on the [UNFCCC website](#). The UNFCCC has also provided [an initial report template](#).
- » **Annual information:** the annual information report aims to list authorized ITMOs; transfers; the use of ITMOs towards NDC or other purposes; the cooperative approaches to date; the mitigation activities. Annual information must be submitted to the UNFCCC no later than 15 April of the following year. A draft version of the template for the agreed electronic format in which annual information is submitted is available on the [UNFCCC website](#).

- » **Regular information:** countries engaging in Article 6 cooperative approaches must submit “regular information” to the UNFCCC, which is attached as an annex to that country’s Biennial Transparency Report (BTR). The regular information report contains similar information to the Annual Report, but with much more details on each cooperative approach and their impacts, including in terms of development. Most significantly, the regular information report will contain a “structured summary” that shows how corresponding adjustments have been applied against the country’s GHG inventory, resulting in an adjusted emissions balance.<sup>70</sup>

#### 44. What revenues can countries expect to generate from carbon markets? How are revenues used?

Aside from the carbon finance generated through the sale of carbon credits, which goes to ensure the financial viability of projects, Governments can mobilize resources through fees, charges, or levies set on project developers. For a given country, as explained in [What are common measures found in Article 6 strategies?](#), the objectives of the establishment of fees and charges would primarily include:

- » Managing the administrative costs incurred by participation to Article 6. The approval, authorization, registration, and management processes require staff time, coordination, and digital infrastructures.
- » Managing the risk of overselling emissions reductions: selling too many ITMOs and not being able to meet NDC targets. There are several strategies to manage the overselling risk, including setting a levy.
- » Revenue generation for reinvestments in climate action (mitigation and adaptation).

In this context, fees, charges, and levies imposed on project developers can include:

- » Administrative fees can be set to manage the costs of participation to Article 6. This can include fees on the approval of the carbon project; on the registration of the project; or on ITMO authorization. Additional fees can be set on changes to the project activities or renewal fees.
- » A different levy can be set on ITMOs in order to manage the overselling risk, but it is not often considered as there are more simple ways to address the overselling risk (e.g. creating a negative list of activities excluded from Article 6 cooperation).
- » A levy on ITMOs can be set by countries, either as a share of revenues or as a fixed price per ITMO, in order to contribute to mitigation or adaptation issues (this would be a benefit-sharing mechanism).

<sup>70</sup>Ibid.

In setting fees, charges, and levies, Governments must carefully follow principles of simplicity, transparency, and proportionality. It would be counterproductive for policymakers to set fees, charges, and levies at deterrent levels, that are too numerous, or that are unclear, as they would significantly reduce attractiveness.<sup>71</sup>

## 45. Can countries reserve a share of mitigation outcomes generated by an Article 6 mitigation activity in order to support achievement of their NDC?

To minimize the risk of overselling ITMOs, host countries can choose to reserve a share of mitigation outcomes (MOs) generated by a mitigation activity for use towards domestic NDC achievement. For example, if a mitigation activity generates 70,000 MOs, the host country may choose to only authorize 70% of MOs (49,000) for international transfer as ITMOs, and retain 30% of MOs (21,000) for use towards the achievement of domestic mitigation targets. See Figure 9.

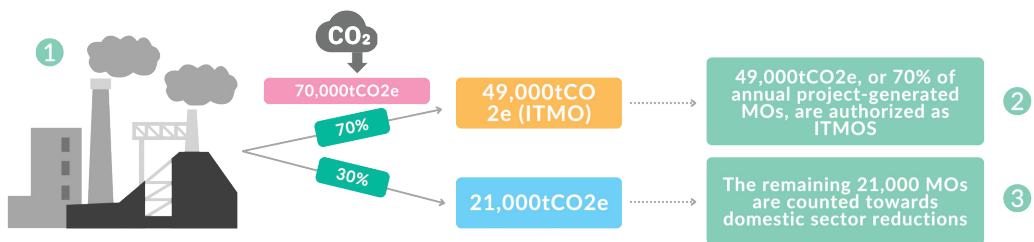


Figure 9. Reserving a portion of MOs for domestic NDC use. Source: GGGI.

Several host countries have already indicated in their national frameworks that they will reserve a share of MOs for domestic use:

- » **Ghana:** Ghana's Carbon Market Framework specifies that 1% of MOs will be reserved for domestic use.<sup>72</sup>
- » **Cambodia:** Cambodia's Article 6 Operations Manual specifies that the Government of Cambodia may take ownership of up to 10% of MOs (i.e., and use these towards achievement of Cambodia's NDC targets)<sup>73</sup>
- » **Rwanda:** Reserves 10% of MOs for domestic use, according to a study by the Climate Finance Innovators project.<sup>74</sup>
- » **Indonesia:** Regulation in Indonesia specifies a potential range of MOs that must be reserved for domestic use, which varies depending on whether the mitigation activity generating the MOs is within the NDC or not. For mitigation activities in the NDC, 10-20% of MOs must be

<sup>71</sup> Climate Finance Innovators, *Setting an Article 6 Levy Structure in Senegal: A practical guide to administrative fees and benefit-sharing levies under Article 6 of the Paris Agreement*, 2024.

<sup>72</sup> Ghana, *Ghana's framework on international carbon markets and non-market approaches*, 2023.

<sup>73</sup> Cambodia, *Operations Manual for the Implementation of Article 6 of the Paris Agreement on Climate Change in Cambodia*, 2024.

<sup>74</sup> Climate Finance Innovators et al., *Setting an Article 6 levy structure in Senegal*, 2024.

reserved for domestic use. For non-NDC activities, at least 20% of MOs are reserved for domestic use (in recognition that the ITMO overselling risk is higher from activities not in the NDC).<sup>75</sup>

Moreover, the Climate Finance Innovators project in Senegal analyzed in a recent report the various options for host countries to benefit from Article 6 engagement while minimizing the risk of overselling ITMOs.<sup>76</sup> The report notes that reserving a share of MOs for domestic use is, in theory, not necessary if other strategies (such as an appropriate fee/levy structure, and robust authorization criteria) are properly developed. However, retaining the flexibility to reserve a limited portion of MOs can provide one potentially important means of utilizing Article 6 to support NDC achievement.

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# 8

## LAO PDR AND ARTICLE 6

### 46. How does Article 6 fit within Lao PDR's national development priorities?

The Government of Lao PDR has expressed strategic interest in the role of international carbon markets to support climate and development objectives in several policy documents:

- » **The National Socio-Economic Development Plan (NSEDP):** the 9th NSEDP calls for the implementation of the NDC and the acceleration of REDD+ projects in the second output of its fourth outcome. The latter has a clear target on emission reduction from deforestation (USD 30 million) and for the sale of forest carbon credits to a value of USD 95 million.<sup>77</sup>
- » **The National Socio-Economic Development Plan's Financing Strategy and Least Developed Country Graduation Smooth Transition Strategy:** there is one specific action (action 54) that calls for "the study of the feasibility and relevance of carbon credits and emissions trading schemes, and potential policies and actions to finance biodiversity protection".<sup>78,79</sup>
- » **The National Green Growth Strategy:** there is a clear commitment

<sup>75</sup>Indonesia, TATA LAKSANA PENERAPAN NILAI EKONOMI KARBON, 2022.

<sup>76</sup>Climate Finance Innovators et al. Setting an Article 6 levy structure in Senegal, 2024.

<sup>77</sup>Lao PDR, 9th Five-Year National Socio-Economic Development Plan (2021-2025), 2021.

<sup>78</sup>Lao PDR, the 9th National Socio-Economic Development Plan Financing Strategy (2023-2025), 2023.

<sup>79</sup>Lao PDR, the Lao PDR Smooth Transition Strategy for LDC Graduation, 2022-2026 with a vision to 2030 and beyond, 2024. [awaiting endorsement].

from the Government of Lao PDR to “generate revenue from the exchange of carbon credit in international markets” under the Energy and Mines sector.<sup>80</sup>

- » **The 2nd NDC:** the NDC mentions Lao PDR’s request for support on a number of technical issues: “administrative, legal, technical and institutional capacity building, policy design and readiness support for the implementation of its NDC, including but not limited to measurement, reporting and verification, data collection, processing and management for GHG emissions inventories, GHG and climate modeling, carbon trading and enhanced mainstreaming of climate change into national and sub-national policies, including through climate action planning tools such as climate risk screening and climate budgeting”. Paragraph 4.3 “Voluntary International Cooperation” expresses interest in cooperation with other nations but without more specifications.<sup>81</sup>

At the sectoral level, carbon markets can support:

- » **The National REDD+ Strategy:** it sets clear targets in terms reduced emissions from forest degradation and deforestation, which are covered under the country’s NDC.<sup>82</sup>
- » **Renewable Energy Development Strategy:** it foresees renewable energy capacity development in hydropower, solar, wind, biomass, biogas, and solid waste.<sup>83</sup>

## 47. What can LDCs such as Lao PDR gain from Article 6 cooperation?

As a country with significant carbon sequestration potential with ambition to pursue low-carbon economic development, participation to Article 6 can yield significant results:

- » **Global and national mitigation:** selling ITMOs (as well as the cancellation of ITMOs) can support the achievement of the global climate agenda. Some provisions can be added in trades to retain the ownership of some emissions reductions to support achievement of Lao PDR’s mitigation targets. See [What are common measures found in Article 6 strategies?](#)
- » **Private sector development:** mitigation activities can be viable with the support of carbon finance, and lead to more investments in low-carbon activities. This can stimulate private sector development, both of international and domestic companies, which in turn contributes to economic growth.
- » **Development co-benefits:** mitigation activities can generate growth and deliver additional benefits: poverty reduction through income

<sup>80</sup> Lao PDR, National Green Growth Strategy of the Lao PDR till 2030, 2018.

<sup>81</sup> Lao PDR, Nationally Determined Contribution (NDC), 2021.

<sup>82</sup> Lao PDR, National REDD+ Strategy, 2021.

<sup>83</sup> Lao PDR, Renewable Energy Development Strategy, 2011.

generation and benefit-sharing; cleaner air for improved health outcomes; enhanced waste management practices; among others. Targeted mitigation activities, well aligned with the country's development agenda, can support the Sustainable Development Goals (SDGs) agenda.

- » **Financial resources:** the flows of carbon finance incentivize mitigation activities, but financial resources can also be transferred to the State for reinvestment, through the careful administration of fees, charges, and levies.
- » **Technology transfers:** carbon markets can incentivize activities that will require specific technologies that are currently inaccessible or unavailable in Lao PDR.

However, to ensure that Article 6 cooperation delivers on all of these elements, a solid and strategic governance framework needs to be put in place. The identification of strategic priorities for voluntary cooperation under Article 6.2 is critical.

## 48. What is Lao PDR's experience with international carbon markets?

According to the Department on Climate Change of the Ministry of Natural Resources and Environment, since its accession to the UNFCCC in 1995 and to the Kyoto Protocol in 2003, Lao PDR has leveraged three mechanisms to reduce emissions: the Clean Development Mechanism (CDM), the Joint Crediting Mechanism (JCM) and the Reducing Emission from Deforestation and forest Degradation (REDD+) mechanism. These have been active in Lao PDR in forestry, energy, transportation, industry, natural resources management, and waste. More than 40 projects, contributing to 10 million tons of CO<sub>2</sub>e of emissions reductions, have been developed:

- » 33 with the CDM of which 28 are in the hydropower sector, 2 on energy efficiency, 1 on biomass, 1 on forestry, and 1 on cookstoves;
- » 7 with the JCM of which 1 on LEED, 1 on REDD+, 1 on energy efficiency, and 4 on solar energy.
- » 7 on REDD+, of which 1 only is being implemented.

32 voluntary carbon projects have also been developed, using the Verified Carbon Standard (14 registered projects) and Gold Standard (18 projects), in the energy (hydropower, cookstoves, energy efficiency, biogas) and forestry (afforestation, reduced deforestation) sectors.

As of September 2024, Lao PDR had signed two Memorandums of Understanding (with the Republic of Korea and with Singapore) but is yet to sign Bilateral Agreements for cooperation under Article 6.2.

## 49. As of September 2024, what was Lao PDR doing to prepare for Article 6 cooperation?

As with all other countries, Lao PDR needed to make some adjustments to its laws, regulations, strategies, and processes before being ready to participate in and access international carbon markets.

As of September 2024, Lao PDR has been making progress towards the development of a governance framework that will allow its participation to Article 6 and other carbon markets (see figure 10 below):

- » The Government has prioritized the preparation of a **national decree on carbon credits**. The draft decree has provisions on requirements, processes, and responsibilities for the registration, approval, authorization, and implementation of carbon projects. As the decree does not specifically provide regulations on Article 6, additional multi-sectoral guidance on authorization and management regarding Article 6 specifically will be prepared by the Government to guide Article 6.2 voluntary cooperation.
- » Sectoral ministries are simultaneously preparing **sectoral-specific regulations** to further guide authorities and project developers within their sectors. In particular, GGGI supports the Ministry of Energy and Mines to develop such guidance.
- » Under the Program for Open and Sustainable Carbon Markets in Lao PDR, GGGI will provide technical assistance to the Government to develop a **national registry**, in collaboration with the World Bank. The Program also foresees technical assistance to the preparation of a national carbon markets strategy, which should be aligned with the country's NDC and LT-LEDS, also in collaboration with the World Bank.

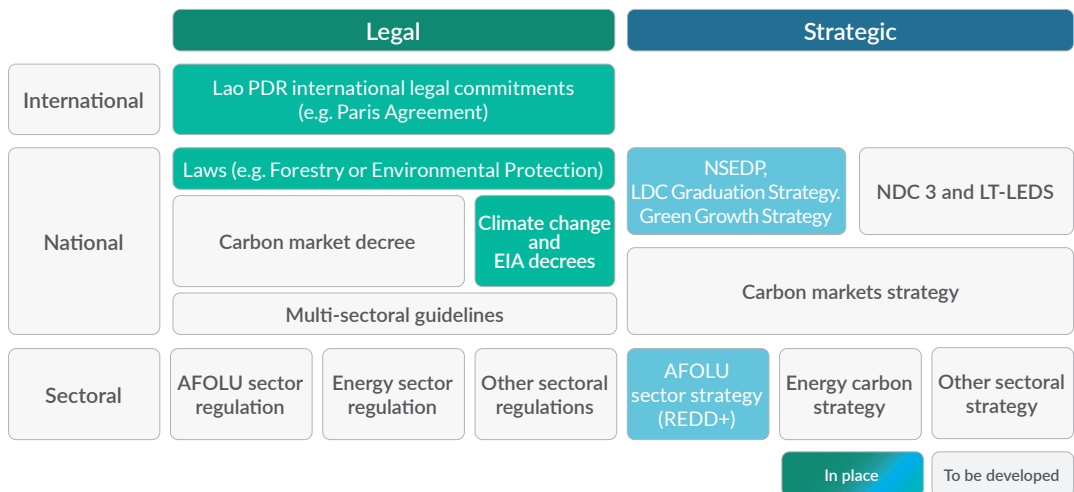


Figure 10. Planned policy framework in Lao PDR as of September 2024. Source: GGGI.



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