ARTICLE 6 Capacity Building

TECHNICAL REPORT:

REVIEW OF ECONOMIC AND NON-ECONOMIC INSTRUMENTS TO FOSTER ARTICLE 6 CONTRIBUTIONS TO NDC ACHIEVEMENT IN HOST COUNTRIES

AUGUST 2025

german cooperation
DEUTSCHE ZUSAMMENARBEIT
Implemented by: giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
CLIMATE FOCUS

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices:
Bonn and Eschborn, Germany

Address:
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T + 49 6196 -79 – 0
E info@giz.de
I www.giz.de

Programme:
Article 6 Capacity Building Project

Contact:
Denise Engel (Head of Project)

On behalf of:
German Federal Ministry for Economic Cooperation and Development (BMZ)

Author:
Climate Focus

Contributors:
Guisselle Castillo
John Kasiita Ssemulema

GIZ is responsible for the content of this publication.

Photo Credit:
GIZ

Published:
August 2025

1 EXECUTIVE SUMMARY

Countries across the global south are rapidly advancing the institutional and regulatory frameworks needed to participate in international carbon markets under article 6 of the paris agreement. As early movers begin to authorize mitigation activities, issue internationally transferred mitigation outcomes (ITMO), and engage in bilateral cooperation, host countries face the dual challenge of creating attractive market conditions for investment while ensuring environmental integrity and safeguarding the achievement of their nationally determined contributions (NDC).

This report examines how seven early-mover countries (Ghana, Kenya, Zimbabwe, Thailand, Indonesia, Chile, and Paraguay) are designing and implementing economic and non-economic instruments to regulate, manage, and strategically benefit from activities under article 6. By mapping instruments already in place and comparing regulatory approaches across regions, the report identifies emerging trends, common challenges, and practical lessons for host countries.

Objective of the report

The purpose of this technical report is to provide policymakers, regulators, and market stakeholders with a comparative analysis of three categories of instruments used by host countries to govern article 6 activities:

1. Targeted levies
   – adaptation levies
   – levies to finance additional mitigation
   – levies for socio-economic co-benefits
2. Risk-mitigation instruments
   – withholding of credits to ensure ndc achievement (buffer systems)
3. Administrative fees
   – application, approval, registration, issuance, authorization and registry fees

The report consolidates regulatory information from national legislation, article 6 frameworks, initial reports submitted to the unfccc, bilateral cooperation agreements, and publicly available government documents. It includes detailed country factsheets and a comparative matrix to support easy reference and cross-country analysis.

Key findings

1. Countries are adopting diverse approaches, but most prioritize administrative fees first.

   Early instruments tend to focus on covering the operational costs of national carbon market systems (e.g., registration, authorization, issuance, and registry operation). Ghana, kenya, and zimbabwe have already defined detailed fee structures, while others are still developing their systems.

2. Targeted levies remain limited but are emerging as powerful tools for national climate finance.

   Only zimbabwe has established a comprehensive adaptation levy (30% of gross revenues) linked to a national climate fund. Some countries, such as ghana, channel a share of authorization fees into mitigation funds, but systematic adaptation or socio-economic levies remain the exception.

3. Withholding mechanisms are emerging as a key integrity safeguard under Article 6.

   Ghana, Indonesia, Zimbabwe, Paraguay, and Thailand apply withholding rates ranging from 1% to 20% to manage NDC risks, address uncertainties, or ensure correct application of Corresponding Adjustments. Thailand's newly established 10% buffer reflects a growing global trend toward precautionary credit management to avoid double counting.

4. Many countries consolidate article 6 and VCM regulations under unified carbon market laws.

   Ghana, kenya, zimbabwe, and paraguay regulate article 6 within broader carbon market legislation, enabling consistent treatment of mitigation activities across both compliance and voluntary markets.

5. No country has introduced taxes in the strict legal sense, but some levies function similarly.

   Legal and administrative complexity makes levies a more flexible choice than taxes. Zimbabwe's environmental levy is the closest example of a taxation-like mechanism.

6. A "one-fee" model is emerging in some countries.

   Ghana exemplifies a consolidated approach where the corresponding adjustment fee covers authorization, reporting, and contributions to national mitigation funds, reducing bureaucratic fragmentation.

Implications for host countries

- Balancing integrity and attractiveness: fees and levies must be set at levels that do not discourage investment while still creating value for the host country.
- Strategic use of levies: adaptation and mitigation levies have high potential to mobilize domestic climate finance, provided that governance structures ensure transparent use of revenues.
- NDC safeguards are essential: withholding mechanisms help host countries maintain control over carbon asset transfers and avoid risks of exceeding NDC limits.
- Integrated frameworks bring efficiency: consolidated regulations for article 6 and VCM activities can simplify procedures for project developers and reduce administrative burdens.
- Need for continued guidance and capacity-building: as countries refine their regulatory frameworks, targeted technical support remains critical to strengthen institutional arrangements and ensure high-integrity implementation of article 6.

Overall conclusion

There is no universal model for structuring article 6 levies, fees, and non-economic instruments. Instead, countries are developing context-specific systems that reflect their governance capacities, national climate priorities, and market engagement strategies. While administrative fees are currently the most common instruments, more sophisticated arrangements, including levies for adaptation and additional mitigation, are beginning to emerge. These early experiences offer valuable lessons for other host countries seeking to develop robust, high-integrity carbon market frameworks aligned with their NDCs.

2 INTRODUCTION

This technical report aims to present the various non-economic and economic instruments that host countries can implement to strategically structure their engagement with international carbon markets and effectively use Article 6 to support the achievement of their national NDC targets.

The analysis will examine the (non-)economic instruments other countries have already implemented. Such global benchmarking, including countries from Latin America, Africa, and Asia, will provide host countries with an orientation for establishing their own measures to guarantee attractive market conditions for investors in mitigation activities without jeopardizing the achievement of national climate targets.

The paper begins with an introduction of Article 6, the basic concept of (non-)economic instruments, and a definition of selected instruments. The main part of this paper is a compilation of country factsheets, informed by the list of instruments and the analytical framework below. The results of this analysis will be summarized in a comparative matrix and conclusions, including a discussion on the overarching global trends that can be observed from the few countries that have already implemented one or multiple (non-)economic instruments.

2.1 Article 6 of the Paris Agreement

Article 6 of the Paris Agreement allows countries to enter voluntary cooperation to achieve their Nationally Determined Contributions (NDC) targets. Article 6 consists of three approaches.

- **Article 6.2** is a decentralized market-approach that allows countries to enter bi- or multilateral agreements to transfer mitigation outcome, so called Internationally Transferred Mitigation Outcomes (ITMOs).[1]
- **Article 6.4**, also known as the Paris Agreement Crediting Mechanism (PACM), is a centralized market mechanism established under the UNFCCC and successor to the Clean Development Mechanism, which can be used to generate carbon credits.[2]
- **Article 6.8** is a framework for non-market approaches through which countries can cooperate and enhance climate action through technology transfer, capacity-building and financial support without any transfer of carbon credits.[3]

[1] UNFCCC (2025). Article 6.2 Cooperative Approaches, available at: https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-62.
[2] UNFCCC (2025). Article 6.4 Paris Agreement Crediting Mechanism, available at: https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism
[3] UNFCCC (2025). Article 6.8 Non-Market Approaches, available at: https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-68

2.2 What are (non-)economic instruments under Article 6 and what is their purpose for host countries?

Engaging in international carbon markets, both under Article 6 as well as the voluntary carbon market (VCM), requires significant institutional and economic investments, such as the costs to set up the administrative procedures and opportunity costs linked to the authorization and transfer of ITMOs.[4] In addition, host countries of mitigation activities may also want to ensure that such activities contribute to the achievement of other climate policy targets and Sustainable Development Goals (SDG), which necessitate additional financing and investments.

For this reason, countries may wish to introduce a set of economic and non-economic instruments under their carbon market framework to ensure the market is fully operational, benefits local communities, covers all government-related costs, and national policy goals are achieved. At the same time, such instruments should be carefully balanced to not undermine the economic viability of carbon market activities in the host country and attract private sector investments.

3 METHODOLOGY AND ANALYTICAL FRAMEWORK

This analysis considers and looks at three types of (non-)economic instruments, including i) targeted levies, ii) risk mitigation levies for non-achievement of NDC, and iii) administrative fees.

Targeted levies and risk mitigation levies are particularly suited to ensure that host countries can retain a tangible value from an Article 6 transactions (e.g. co-benefits and finance for additional mitigation and adaptation), while not undermining their ability to meet their NDC. Administrative fees serve the purpose to cover the costs of running the national system.

Priority is given to the first two types of instruments. However, each country analysis will also provide a comprehensive overview of implemented administrative fees, if applicable, as additional information. The country factsheets are structured according to the below list.

It should be noted that countries use different definitions for the same terms and apply instruments in line with their country-specific carbon market conditions. For example, the term 'levy' may be used collectively for any fees and charges, or even taxes, on mitigation activities.

3.1.1 Targeted levies

[4] Under Article 6, opportunity cost occurs when a country chooses to authorize mitigation outcomes for transfer rather than use them toward its own NDC. Because a corresponding adjustment must be applied, the country will need to undertake additional and potentially more expensive mitigation measures domestically to make up for the transferred reductions.

Countries may impose dedicated charges on ITMO transactions to support complementary objectives, particularly to mobilize resources for national climate mitigation and adaptation strategies. In this regard, it is important to differentiate between the internationally mandated fees and the potentially additional fees imposed by countries. The paper only looks at the latter.

Under Article 6.4, two types of international fees are applied:

I. Share of Proceeds (SOP): 2% of issued A6.4ERs are automatically cancelled to support the Adaptation Fund.
II. Overall Mitigation in Global Emissions (OMGE): 2% of issued A6.4ERs are cancelled to ensure a net reduction in global emissions.

Under Article 6.2, there is no centrally mandated SOP or OMGE. However, host countries may choose to apply similar additional fees as domestic measures, including:

- Adaptation levy, i.e. adaptation contribution
- Levy to finance additional mitigation activities
- Levy to mobilize finance for other socio-economic purposes

3.1.2 Risk mitigation levies for non-achievement of NDC

- Withholding carbon credits.

  Countries may implement this measure to address the risk of non-achievement of their NDCs. A certain percentage of authorized credits are retained in a national buffer account to address the risks of reversals or non-achievement of their NDC targets. This means that after issuance only a fraction from all mitigation outcomes would be authorized for transfer during the NDC period, while a certain amount is withheld until it is guaranteed that the host country would attain its NDC goal.

> Some countries also use withholding to **strengthen accounting accuracy under Article 6**. For example, Thailand's recently published *International Carbon Credit Guideline* requires that at least 10% of accumulated carbon credits generated during the transfer period be withheld and deducted from the units transferred in the final year. This measure aims to ensure proper accounting and avoid double counting when applying Corresponding Adjustments.

3.1.3 Administrative fees

Administrative fees are primarily intended to recover the costs that governments incur in managing and regulating carbon credit activities. The different options could include, but vary from country to country:

- Application fee:
    - Application fee for the participant in the mitigation activity
- Registration/Listing fee:
    - Fee of creating a unique identification number for the mitigation activity
    - Fee for each new mitigation activity by a participant who is already registered

- Issuance, approval and authorization fee:
    - Approval fee (activity)
    - Issuance fee (ITMOs)
    - Authorization fee (entity)
    - Authorization fee (ITMOs), i.e. corresponding adjustment fee

- Registry:
    - (Annual fee) for the mitigation activity to cover registry operation costs

Relevant country-specific information was retrieved from current carbon market regulations and additional documents on cooperative approaches (e.g. initial reports submitted to the UNFCCC Central Accounting and Reporting Platform, CARP). The links to these documents are provided in the country overviews.

Information presented in this report reflects the status of national Article 6 frameworks, carbon market regulations, and associated fee and levy structures as of august 2025. Given the rapidly evolving nature of carbon market governance, many countries are in the process of updating or expanding their regulatory instruments, publishing new guidance, or refining procedures for authorization, issuance, registration and reporting. As a result, certain provisions may change shortly after the release of this report. While every effort was made to review the most recent publicly available documents, the analysis should be interpreted as a snapshot in time within a dynamic and fast-changing policy environment.

4 COUNTRY FACTSHEETS

The country factsheets are ordered by geography as follows: Africa, Asia and Latin America.

4.1 Ghana

4.1.1 Brief description of Article 6 readiness

Article 6 Framework • In 2022, Ghana published its national **Framework on International Carbon Markets and Non-market Approaches, which serves as Article 6 framework**	☒ Yes ☐ No
Carbon Market Regulations • In 2025, Ghana adopted **the Environmental Protection Act** as legal basis for implementing the Article 6.2 cooperative approaches and the Article 6.4 mechanism	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Switzerland: **Cooperation agreement**, incl. 12 projects across different sectors. First ITMO transfers from a cookstove project. • Singapore: **Implementation Agreement**, no projects yet. • Sweden: **MoU**, however, no projects developed yet. • **Liechtenstein: Letter of Intent exchanged.** • South Korea: **Negotiations** on Article 6 cooperative approach under way.	☒ Yes ☐ No
Existing Article 6 Activities • **12 activities** under the cooperative approach with Switzerland • **First call of project applications** with Singapore	☒ Yes ☐ No
(Updated) initial reports • **Updated initial report** (2023) for CA0002 "*Promotion of climate smart agriculture practices for sustainable rice cultivation in Ghana*"	☒ Yes ☐ No

4.1.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☐ Yes ☒ No	Ghana has no defined arrangements for adaptation levies.
Finance for other mitigation activities		

Levy to fund additional mitigation	☒ Yes ☐ No	As part of the corresponding adjustment fee (see below). 90% of the CA fee is deposited in a national mitigation ambition fund to support additional mitigation activities outside the NDC.
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	Ghana has no defined arrangements to charge a levy to other specific socio-economic activities.
Taxes		
Share of revenue	☐ Yes ☒ No	n/a
Fixed	☐ Yes ☒ No	n/a

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☒ Yes ☐ No	1%	Ghana withholds 1% of authorized mitigation outcomes. For example, this means that 10,000 units out of 1,000,000 units are withheld and reserved in a national buffer account and may be used to mitigate the risk of overselling against Ghana's NDC target or cancelled contribute overall mitigation of global emissions. Example: See paragraph VI of the updated initial report in Respect of Authorization of ITMOs From the Cooperative Approach Between the Republic of Ghana and the Swiss Confederation.

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☒ Yes ☐ No	USD 1,000	Only for Article 6.4 activities seeking a letter of approval. The amount covers the administrative costs of processing and issuing the letter by the authorizing entity.
Registration/Listing request fees	☒ Yes ☐ No	USD 300-1000	**Listing Fee.** All mitigation activities (i.e. VCM and Art.6) are levied with a listing fee which covers administrative expenses of the Carbon Market Office for delivering registration, issuance and

			transfer services and the maintenance cost of the registry system. The listing fee is charged as follows: • All mitigation activities seeking to generate ITMOs for authorization and transfer: USD 0.2/unit • VCM activities not requiring authorization: USD 0.01/unit **Mitigation Activity Participant or Entity Application Fee**. All projects are required to be registered in Ghana's carbon registry. Project participants are required to open an account. The MAP application fee is paid on creation of an account by mitigation activities seeking to generate authorized units, as follows: • Grant-based small-scale mitigation activity: USD 300 • Small-scale mitigation activity: USD 500 • Large-scale non-forestry project: USD 1000 • Forestry project: USD 500
Registry fee	☒ Yes ☐ No	USD 400 or USD 300 USD 200-500	**Unique Identification Number (UIN).** All entities participating in carbon market activities in Ghana pay a one-time fee to receive a Unique Identification Number (UIN) for recording in the national carbon registry. If an entity that has previously been registered gets involved in a new or additional activity, the fee is slightly lower. **Mitigation Activity Identification (MID) Fee.** Each mitigation activity registered in the national carbon registry and seeking to generate authorized units are issued with a mitigation activity identification (MID). For any additional mitigation activity by a project developer that was not registered at the time of creating a MAP account, the following fees apply: • Grant-based small-scale mitigation activity: USD 200 • Small-scale mitigation activity: USD 300 • Large-scale non-forestry project: USD 500 • Forestry project: USD 300
Issuance fee (ITMO)	☐ Yes ☒ No	-	n/a
Authorization fee (entity)	☒ Yes ☐ No	-	Entities that seek authorization to participate in an Article 6.4 activity pay a fee of USD 500 to cover the administrative costs of processing and issuing the letter of entity authorization (LEA)

Authorization fee (ITMO), i.e. corresponding Adjustment fee	☒ Yes ☐ No	USD 3-5 per unit of ITMOs	The fee is used to fund implementation of further mitigation activities and administrative costs as follows: • 10% of the CA fee is used to cover the administrative cost for authorization, transfer and reporting of ITMOs. • 90% is deposited in a mitigation ambition fund to support additional mitigation actions outside the NDC. Fees as follows: • Grant-based small-scale mitigation activity: USD 3/unit • Small-scale mitigation activity: USD 5/unit • Large-scale non-forestry project: USD 5/unit • Forestry project: USD 5/unit
Other fees	☐ Yes ☒ No	-	n/a

4.2 Kenya

4.2.1 Brief description of Article 6 readiness

Article 6 Framework • An Article 6 framework, aligned with the regulations below, is expected by end of 2025.	☐ Yes ☒ No
Carbon Market Regulations • Kenya's **Climate Change (Amendment) Act, 2023**, serves as basis for an Article 6 framework. • In 2024, Kenya passed the **Climate Change (Carbon Markets) Regulations**, providing the legal basis for any carbon market activity, including Article 6.	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Switzerland: **Implementation Agreement**, no projects developed yet.	☒ Yes ☐ No
Existing Article 6 Activities • None yet	☐ Yes ☒ No
(Updated) initial reports n/a	☐ Yes ☒ No

4.2.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☐ Yes ☒ No	n/a
Finance for other mitigation activities		
Levy to fund additional mitigation	☐ Yes ☒ No	n/a
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	n/a
Taxes		
Share of revenue	☐ Yes ☒ No	Kenya's carbon market regulation does not define a share of revenue or fixed rate (below) in the legal sense of a tax. The regulation itself only applies fees as described below.

Fixed	☐ Yes ☒ No	n/a

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☐ Yes ☒ No	-	n/a

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☒ Yes ☐ No	KES 150,000-300,000 *(USD 1,100-2,300)*	**Administrative Fee upon approval of project design document.** After submission of a project design document to DNA, the design document is reviewed by a technical committee and on positive assessment, approved by the DNA. On approval by DNA, project proponents are required to pay administrative fees as follows: • A carbon project with projected annual issuance of 15,000 carbon credits per annum or less: KES 150,000 • A carbon project with projected annual issuance of more than 15,000 carbon credits per annum: KES 300,000
Registration/Listing request fees	☒ Yes ☐ No	KES 10,000-100,000 *(USD 75-775)*	**Carbon Project Application Fee.** Project proponents that wish to engage in a carbon project (both Article 6 and VCM) must request for approval from the Designated National Authority by submitting a project concept note and a project application fee. The project application fee is as follows: • For citizens: KES 10,000 • For non-citizens: KES 100,000
Registry fee	☐ Yes ☒ No	-	n/a
Issuance fee (ITMO)	☒ Yes ☐ No	USD 0.10-0.20 eq.	**Issuance of carbon credits fee.** As follows: • The Kenya Shilling equivalent of USD 0.10 per carbon credit issued for the first 15,000 tonnes of CO_2 equivalent for which issuance is requested in a given year. • The Kenya Shilling equivalent of USD 0.20 per carbon credit issued for any amount in excess of 15,000 tonnes of CO_2 equivalent for which issuance is requested in a given year.

			It is not clear which specific administrative costs are covered by this fee. However, the fixed administrative fee paid on approval of the project design document is deducted from the administrative fee payable on first issuance.
Authorization fee (entity)	☐ Yes ☒ No	-	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☒ Yes ☐ No	USD 4/unit of ITMO	This fee is listed as an administrative fee, and the assumption is that it is aimed to cover the administrative costs of effecting corresponding adjustment.
Other fees	☒ Yes ☐ No	KES 100,000-200,000 *(USD 775-1,550)*	**Carbon Project Design Document Fee**. A project that has received a letter of no objection is required to develop and submit to the DNA a project design document. A project design document submitted to the DNA is to be accompanied by, among others, a stakeholders' report, a validation report and prescribed fees (referred to as project design document fee). The fee is as follows: • For citizens: KES 100,000 • For non-citizens: KES 200,000

4.3 Zimbabwe

4.3.1 Brief description of Article 6 readiness

Article 6 Framework • Zimbabwe is currently developing a full Article 6 Strategy, expected by end of 2025.	☐ Yes ☒ No
Carbon Market Regulations • In 2023, Zimbabwe passed **the Carbon Credits Trading (General) (Amendment) Regulations**. In 2025, it gazetted the **Carbon Trading (General) Regulations, 2025 (Statutory Instrument 48)**, effectively regulating carbon trading, incl. Article 6.	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • UAE: **MoU** with Blue Carbon	☒ Yes ☐ No
Existing Article 6 Activities • In development in the clean cooking sector	☒ Yes ☐ No
(Updated) initial reports **Initial report** for CA0011 "Cicada Clean Cooking Zimbabwe"	

4.3.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☒ Yes ☐ No	Zimbabwe has environmental levy of 30 % of gross proceeds from the sale of carbon credits. This amount is deposited in the Environment Fund and distributed as follows: • 55% for Investment in climate change adaptation and low carbon development projects • 5% for Loss and damage relief fund • 10% for appropriate authority and local authority levies • 15% for administrative costs and capacity enhancement of the Authority, Registry, and Carbon Trading • 15% Treasury fiscal requirements
Finance for other mitigation activities		
Levy to fund additional mitigation	☒ Yes ☐ No	30% of all authorized mitigation outcomes (following the application of the mandatory deductions and reservations referred to above) constitute the Carbon Levy and are collected by the Government of Zimbabwe. These shall then be either cancelled towards the achievement of Zimbabwe's NDC or commercialized in a manner that directly contributes to the achievement of Zimbabwe's NDC and LT-LEDS.
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		

Levies collected for specific purposes	☒ Yes ☐ No	There are no additional levies in addition to the Carbon Levy described above. However, the Climate Change Management Act (2025) stipulates that 85% proceeds from carbon trading shall be contributed to the National Climate Fund (NCF). These funds will be used to finance national mitigation and adaptation programs, gender mainstreaming, and domestic decarbonisation efforts, among other things.
Taxes		
Share of revenue	☐ Yes ☒ No	No mandate for share of revenue, but de facto mandatory deductions from carbon activity proceeds under the environmental levy (see above), with a focus on adaptation.
Fixed	☐ Yes ☒ No	n/a

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☒ Yes ☐ No	1%	Automatically cancelled at the time of authorization and counted towards Zimbabwe's NDC
	2%	Of all mitigation outcomes reserved on the national buffer account (NBA) as safeguard against reversals and over crediting. Any authorized mitigation outcomes held in the NBA and not retired to compensate for reversals or over crediting will automatically be retired towards to achievement of Zimbabwe's NDC before the end of the NDC implementation period in which the corresponding emissions reductions or removals were achieved.

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☐ Yes ☒ No	-	n/a
Registration/Listing request fees	☒ Yes ☐ No	-	Entities that intend to participate in an Art. 6.2 cooperative approach or participate in an Art. 6.4 activity are required to submit a letter of intent together with a project idea note. There is, however, no application fee for Art. 6.2 and 6.4 activities.
		USD 5,000	**Submission of Project Design Document Fee** After a positive assessment of letter of intent and project idea note, the DNA issues a letter of no

		USD 0.10 per credit, with a cap at USD 10,000	object. A project proponent that has received a letter of no objection is required to submit a project design document to DNA within 24 months, accompanied by a project design fee. **Registration Certificate Fee**. After assessing project design document (in addition to other documents), the Ministry may approve the project by issuing a registration certificate. The registration certificate is issued upon payment of registration certificate fee.
Registry fee	☐ Yes ☒ No	-	n/a
Issuance fee (ITMO)	☐ Yes ☒ No	-	n/a
Authorization fee (entity)	☐ Yes ☒ No	-	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☐ Yes ☒ No	-	n/a
Other fees	☒ Yes ☐ No	USD 500	**Amendment fee.** Projects that request an amendment to registration are required to pay an amendment fee. **Renewal of Registration Certificate**. 20% of the initial registration fees.

4.4 Thailand

4.4.1 Brief description of Article 6 readiness

Article 6 Framework • The CCMGM (see below) lays the ground for a full Article 6 framework, but additional guidance is needed (e.g. mandates and responsible agencies)	☐ Yes ☒ No
Carbon Market Regulations • Thailand has passed the Carbon Credit Management Guideline and Mechanism (CCMGM) which describes eligible project types, the procedures for seeking project, authorization, project registration, issuance of carbon credits and their international transfers. • Additional regulations include the **Royal Decree establishing the Greenhouse Gas Management Organization (the National Agency) in 2007 (B.E. 2550), amended by the Royal Decree of 2019 (B.E. 2562), and based on the Resolution of the Organization's Board meeting 13/2022 (B.E. 2565)**, **Announcement by the Board of Directors of the Greenhouse Gas Management Organization**, and **Guideline for Premium Thailand Voluntary Emission Reduction Program (Premium T-VER)**	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Switzerland: **Bilateral Agreement** signed in 2022	☒ Yes ☐ No
Existing Article 6 Activities • Bangkok E-bus Program with Swiss cooperation	☒ Yes ☐ No
(Updated) initial reports • **Updated initial report** for CA0003 "*Operation of e-buses on privately owned, scheduled public bus routes in the Bangkok Metropolitan area by Energy Absolute*"	

4.4.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☐ Yes ☒ No	n/a
Finance for other mitigation activities		

Levy to fund additional mitigation	☐ Yes ☒ No	n/a
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	n/a
Taxes		
Share of revenue	☐ Yes ☒ No	n/a
Fixed	☐ Yes ☒ No	n/a

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☒ Yes ☐ No	10%	According to Thailand's recently published *International Carbon Credit Guideline*, at least 10% of the accumulated carbon credits generated during the transfer period will be withheld and deducted from the units transferred in the final year. This measure aims to ensure proper accounting and avoid double counting through the application of Corresponding Adjustments under Article 6 of the Paris Agreement

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☐ Yes ☒ No	-	n/a
Registration/Listing request fees	☒ Yes ☐ No	-	There is no registration defined for Article 6 activities yet. However, carbon projects that are developed under the national crediting mechanism (Thailand Voluntary Emission Reduction Program (T-VER)) are required to pay a registration fee when registering a project with the T-VER. The registration fee is as follows:

		Thai Baht 5,000 *(USD 155)* Thai Baht 10,000 *(USD 310)*	• per application for standard projects, Programme of Activities (PoA) with the first Component Project Activities (CPA) and additional Component Project Activities (CPA) under the PoA. • per application for premium projects, PoA with the CPA and additional CPA under the PoA
Registry fee	☐ Yes ☒ No		
Issuance fee (ITMO)	☒ Yes ☐ No	Thai Baht 3,000-5,000 *(USD 90-155)* Thai Baht 5,000-10,000 *(USD 155-310)*	Only for T-VER issuance as follows: • For standard projects or CPAs under PoA: Thai Baht 5,000 per application, or Thai Baht 3,000 per application plus the deduction of 10 tons of carbon dioxide equivalent (tCO_2e) from the certified carbon credit amount per application. • For premium projects or CPAs under PoA: Thai Baht 10,000 per application, or Thai Baht 5,000 per application plus the deduction of 10 tons of tCO_2e from the certified carbon credit amount per application.
Authorization fee (entity)	☐ Yes ☒ No	-	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☐ Yes ☒ No	-	n/a
Other fees	☐ Yes ☒ No	-	n/a

4.5 Indonesia

4.5.1 Brief description of Article 6 readiness

Article 6 Framework • Indonesia defined its institutional arrangements under Article 6 and is currently developing authorization procedures	☒ Yes ☐ No
Carbon Market Regulations • The **MoEF regulation No. 21/2022** and **Ministerial regulation No. 7/2023** define carbon trading rules	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Norway: **Bilateral agreements** signed in June 2025 • South Korea: **MoU** signed in 2024	☒ Yes ☐ No
Existing Article 6 Activities • No activities implemented yet	☐ Yes ☒ No
(Updated) initial reports n/a	

4.5.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☐ Yes ☒ No	n/a
Finance for other mitigation activities		
Levy to fund additional mitigation	☒ Yes ☐ No	**Carbon trading transaction levy** In the forestry sector, a carbon transaction levy is imposed on the sale and purchase of carbon credits. Currently, this levy is set at 10% of the value of carbon sales.
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	Not further defined (see carbon transaction levy above)
Taxes		
Share of revenue	☐ Yes ☒ No	n/a
Fixed	☐ Yes	n/a

	☒ No	

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☒ Yes ☐ No	 • Up to 5% • 10-20% • At least 20% 5% 20% 30%	According to the MoEF Regulation No. 21/2022, the government withholds a percentage of carbon credits as a buffer to be used against the risk of non-achievement of NDC: • of carbon credits for domestic market • for carbon credits intended for international market • of carbon credits for projects intended for international market and sectors outside the NDC. The MR 21/2022 grants the sectoral ministers the authority to determine the exact percentages for projects within different sectors. Based on the mandate under MoEF Regulation 21/2022, the Minister of Environment and Forestry (MoEF) issued regulations (MR 7/23) and a Decree (SK 1027../1/9/2023) on carbon trading in the forestry sector. Under the Decree, the following amounts are withheld for carbon projects in the forestry sector: • of carbon credits for domestic market • for carbon credits intended for international market • of carbon credits for projects intended for international markets and sectors outside the NDC The withheld amounts (or the unused reserves) are returned to projects if the sector or subsector NDC targets are achieved for two consecutive years.

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☐ Yes ☒ No	-	n/a
Registration/Listing request fees	☐ Yes ☒ No	-	n/a
Registry fee	☐ Yes ☒ No	-	n/a
Issuance fee (ITMO)	☒ Yes ☐ No	TBD	According to MoEF Regulation No. 21/2022, the issuance of GHG emission reduction certificate is subject to a service fee for issuance, which are

			non-tax state revenues. The specific amount of the fee has yet to be defined.
Authorization fee (entity)	☐ Yes ☒ No	-	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☐ Yes ☒ No	-	n/a
Other fees	☐ Yes ☒ No	-	n/a

4.6 Chile

4.6.1 Brief description of Article 6 readiness

Article 6 Framework • In 2024, Chile published an **Article 6 framework**	☒ Yes ☐ No
Carbon Market Regulations • Chile's **national regulatory framework** on climate change provides the basis for the Ministry of Environment to determine the conditions and requirements under which Article 6 transactions will be regulated	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Switzerland: **Bilateral agreement** signed in 2024 • Singapore: **Implementation agreement** signed in 2025	☒ Yes ☐ No
Existing Article 6 Activities • Accelerating electric mobility in Chile (with Switzerland)	☒ Yes ☐ No
(Updated) initial reports n/a	

4.6.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☒ Yes ☐ No	Under the implementation agreement with Singapore, 5% of the proceeds will be channelled to Chile for adaptation activities.
Finance for other mitigation activities		
Levy to fund additional mitigation	☐ Yes ☒ No	n/a
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	n/a
Taxes		
Share of revenue	☐ Yes ☒ No	n/a

Fixed	☐ Yes ☒ No	A domestic "green tax" exists, but it does not apply for Article 6 activities. However, this might change with the arrangements for an Article 6-specific tax and levy structure currently in development.

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☐ Yes ☒ No	-	n/a

(3) Administrative fees

Administrative fees			
Approval fees (activity)	☐ Yes ☒ No	-	n/a
Registration/Listing request fees	☐ Yes ☒ No	-	n/a
Registry fee	☐ Yes ☒ No	-	n/a
Issuance fee (ITMO)	☐ Yes ☒ No	-	n/a
Authorization fee (entity)	☐ Yes ☒ No	-	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☐ Yes ☒ No	-	n/a
Other fees	☐ Yes ☒ No	-	n/a

4.7 Paraguay

4.7.1 Brief description of Article 6 readiness

Article 6 Framework • Paraguay is amongst the most advanced countries in Latin America in terms of an Article 6 framework and established a framework that allows them to engage in Article 6, backed by regulations below.	☒ Yes ☐ No
Carbon Market Regulations • In 2023, Paraguay established the legal basis for carbon credit trading with **Law No. 7190/2023**. • In 2025, Paraguay enacted **Decree No. 3369/2025** that established the carbon markets directorate, the national registry and procedures for Article 6 transactions.	☒ Yes ☐ No
Bilateral Agreements under Article 6.2 • Singapore: **Bilateral agreement** signed in 2025	☒ Yes ☐ No
Existing Article 6 Activities • No project developed yet	☐ Yes ☒ No
(Updated) initial reports n/a	

4.7.2 (non)-Economic instruments under article 6

(1) Targeted Levies

Adaptation		
Adaptation levies	☐ Yes ☒ No	n/a
Finance for other mitigation activities		
Levy to fund additional mitigation	☐ Yes ☒ No	n/a
Specific socio-economic activities (e.g. sustainable development, supporting local communities)		
Levies collected for specific purposes	☐ Yes ☒ No	n/a
Taxes		

Share of revenue	☐ Yes ☒ No	n/a
Fixed	☐ Yes ☒ No	According to **Law 7190/2023 of Carbon Credits**, carbon credits will be exempted from VAT. However, at least 50% of the project development labour must be done by Paraguayan nationals and should include technical professionals.

(2) Withholding Credits

Withholding Emission Reductions and/or Removals		
☒ Yes ☐ No	3-10%	According to the same **Law 7190/2023**, Paraguay will retain 3-10% of credits toward its NDC. The specific percentage is to be determined on a project-by-project basis and depending on whether Paraguay's NDC achievement will be at risk by the transfer of too many ITMOs.

(3) Administrative fees

A list of definitions and services included in each fee category is provided in the Annex.

Administrative fees		
Approval fees (activity)	☐ Yes ☒ No	n/a
Registration request fees	☐ Yes ☒ No	n/a
Registry fee	☒ Yes ☐ No	According to Law 7190/2023, the government will set fees of up to 500 minimum daily wages for actions such as registering a project, issuance of carbon credits, transfers, or making modifications in the carbon credit registry. Projects owned by Indigenous communities will be exempt from paying these fees
Issuance fee (ITMO)	☐ Yes ☒ No	n/a
Authorization fee (entity)	☐ Yes ☒ No	n/a
Authorization fee (ITMO), i.e. corresponding Adjustment fee	☐ Yes ☒ No	n/a
Other fees	☐ Yes ☒ No	n/a

5 COMPARATIVE MATRIX

The following section presents a summary of the country factsheets, compiled into a matrix that facilitates comparison and provides a clearer visualization of the different instruments applied in each country.

Country	Targeted levies				Risk Mitigation levies for non-achievement of NDC	Administrative fees					
	Adaptation levies	Levy to fund additional mitigation	Levies collected for specific purposes	Taxes	Withholding Credits	Approval fee (activity)	Registration fee	Registry fee	Issuance fee (ITMO)	Authorization fee (entity)	Authorization fee (ITMO), i.e. Corr. Adj.
Indonesia					☑				☑ (For ER issuance certificate by national registry)		
Thailand					☑		☑		☑ (only for national crediting mechanism)		
Ghana		☑			☑	☑ (only for A6.4)	☑	☑		☑	☑
Kenya						☑	☑		☑		☑
Zimbabwe	☑		☑		☑	☑	☑				
Chile	☑ (only as part of the BA with Singapore)								☑		
Paraguay					☑			☑			

6 CONCLUSIONS

6.1 Summary of global trends

Only a few countries globally have implemented an advanced structure of (non-)economic instruments for carbon market activities under Article 6 and/or the VCM. Yet, a few important trends can be observed and include the following:

- **One structure covering both VCM and Article 6 activities**: Many countries choose to consolidate their fees and levies in line with their national carbon market regulations, which often covers the regulatory arrangements for both Article 6 and the VCM.
- **Article 6 Levies:** Where specific Article 6 instruments are in place, multiple costs are often covered by a single fee. For example, Ghana's corresponding adjustment fee covers authorization, reporting, and opportunity costs.
- **Streamlined processes:** By combining fees for multiple activities, some countries reduce the bureaucratic effort.
- **Differentiated fees:** Countries can incentivize specific sectors and/or entities by applying different fees depending on the project type, size and nationality of the activity participant.

6.2 Detailed conclusions

The findings of the comparative analysis of (non-)economic instruments under Article 6 to ensure NDC achievement reveal that countries are at different stages of developing and implementing Article 6 frameworks. This has also implications on the definition and set-up of levies, fees and taxes for mitigation activities, including under Article 6. This is due to the fact that countries usually define relevant institutional and governance arrangements first before implementing the regulations that provide the legal basis for Article 6 transactions and often include the fees and levies for different steps along the project cycle from registration/listing to issuance, authorization and transfer. Many countries chose to enact national carbon market regulations with levies that can be applied for all carbon credits transactions, including VCM and Article 6. This usually takes form in an amendment of existing climate change or environmental regulations that also cover carbon markets (e.g. Kenya, Ghana) or through updates of existing carbon trading regulations (e.g. Zimbabwe). Further guidance can be provided in national Article 6 frameworks (e.g. Ghana, Chile).

Therefore, approaches on the use of (non-)economic instruments vary across countries. Overall, countries currently focus on setting-up fees that cover the day-to-day administrative costs and efforts. Only a few countries, including Ghana and Paraguay, have defined or are in the process of defining specific fees for approval letters, registrations, registry fees and authorization. Ghana, for example, consolidates its Article 6 levies in the corresponding adjustment fee that covers authorization, reporting and opportunity costs. Paraguay is in the process of setting up fees for registry services, carbon credit issuances, and transfers.

In terms of targeted levies, only Zimbabwe has so far introduced an adaptation levy arrangement. This comes in the form of an environmental levy of 30 % of gross proceeds from the sale of carbon credits, of which 55% are reserved for investment in climate change adaptation. Tanzania, which was not part of this analysis, also imposes an annual project fee of 3% of the gross revenue from the sale of carbon credits, which is deposited in the National Environmental Trust Fund. In addition, both Ghana and Zimbabwe ensure that levies are contributing either to additional mitigation or other specific purposes, e.g. finance for SDGs and local community support.

As a non-economic instrument, Ghana, Indonesia, Zimbabwe, Paraguay and Thailand are withholding authorized credits, i.e. they are not internationally transferred, to mitigate the risks of NDC non-achievement and to safeguard the integrity of Article 6 transfers. However, the amount differs significantly. While Ghana and Zimbabwe withhold only 1-2% of authorized credits, Indonesia reserves 10%-20% in their national buffer account, Thailand stablishes a fixed 10% on accumulated credits during the transfer period and Paraguay falls into the middle with 3%-10%.

The analysis has shown that no country has introduced taxes in the strict legal sense. However, it can be argued that certain types of levies are de facto taxes (e.g. the environmental levy in Zimbabwe). Although a detailed examination of the legal framework would be necessary to determine the specific reasons for this, it can be assumed that countries prefer to introduce levies, which are less complex to implement than taxes in terms of the legal and regulatory procedures required for their enactment.

In sum, there is no go-to “Article 6 levy model” and countries currently apply approaches that suit their evolving national carbon market engagement strategies. It can be observed that fixed fees are defined for procedural and registry services, while variable levies and revenue-sharing mechanisms are chosen to channel additional finance for adaptation and mitigation activities to the country, enhance climate action, and support local communities.

ANNEX. GLOSSARY[5]

Adaptation levy	A monetary levy used to finance adaptation activities.
Application fee	A fee charged to project proponents to cover the administrative costs when submitting an application for an activity to be approved by the Article 6 host country.
Approval fee (activity)	A fee charged to cover the costs of the government's review and approval of the mitigation activity.
Authorization fee (entity)	A fee charged to cover the government costs related to the authorization of eligible participants in an Article 6 transaction.
Authorization fee (ITMO)	A fee charged (per unit or fixed fee) to cover the government's administrative costs when a host country issues the letter of authorization for the transfer of ITMOS.
Issuance fee (ITMO)	A fee charged (per unit) to cover the government's administrative costs when a host country issues an ITMO.
Levy to fund additional mitigation	Withholding of revenues (% or fixed) to finance additional mitigation activities beyond NDC target.
Levy to fund specific socio-economic purposes	A levy earmarked for other co-benefits, such as local development, community benefits, or similar.
Registration fee	A fee charged to cover the government's administrative costs when registering a mitigation activity in the national Article 6 registry. Countries choose different approaches, but this may include a fee for creating a unique identification number for the mitigation activity or for each new mitigation activity by a participant who is already registered
Registry fee	A fee charged to cover the operation and maintenance costs of a national Article 6 registry.
Taxes	Formal and legally embedded charges imposed by the host country government on revenues from Article 6 mitigation activities.

[5] Kovács, A., Della Maggiore, M. & Pardo, C. (2024). 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. Available at: https://climatefinanceinnovators.com/wp-content/uploads/2024/04/CFI_FeeStructureSenegal_ModalitiesAndRates_2024.pdf.

IMPRINT

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices:
Bonn and Eschborn, Germany

Address:
Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T + 49 6196 -79 – 0
E info@giz.de
I www.giz.de

Programme:
Article 6 Capacity Building Programme

Contact:
Denise Engel (Head of Project)
On behalf of:
German Federal Ministry for Economic
Cooperation and Development (BMZ)
Name of responsible division
Contact person

Author
Climate Focus

Contributors:
Guisselle Castillo
John Kasiita Ssemulema

GIZ is responsible for the content of this publication.

Published:
August, 2025