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SPAR6C

Supporting Preparedness for Article 6 Cooperation

A Toolbox series for Article 6 implementation

Developing an Article 6 host party institutional framework

Guide 3

CARBON LIMITS

GFA CONSULTING GROUP

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UN environment programme | copenhagen climate centre

Federal Ministry for Economic Affairs and Climate Action

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The Global Green Growth Institute
19F Jeongdong Building, 21-15, Jeongdong-gil
Jung-gu, Seoul, Korea 100-784

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Version 1.0: *The version of this guide, including the descriptions of mandatory and optional requirements, is based on the COP26 (2021) and COP27 (2022) decisions on Article 6.2 and 6.4 (i.e., decisions 2/CMA.3, 3/CMA.3, 6/CMA.4 and 7/CMA.4) and so does not yet include any decisions from COP28.*

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Developing an Article 6 host party institutional framework

About the Supporting Preparedness for Article 6 Cooperations (SPAR6C)

The Supporting Preparedness for Article 6 Cooperation (SPAR6C [spark]) program enables stakeholders in Colombia, Pakistan, Thailand, and Zambia to become prepared to engage in carbon transactions under Article 6 of the Paris Agreement. SPAR6C program provides decision support to government counterparts on Article 6 strategy and governance frameworks, capacity building for private sector and technical assistance to identify and prepare mitigation activities which could serve as the basis for Article 6 transactions. In addition to in-country support, SPAR6C program hosts a global knowledge exchange platform, the "Community of Practice for Article 6 Implementing Countries" or CoP-ASIC. The program is implemented by a consortium of experts, led by the Global Green Growth Institute (GGGI), with delivery partners Carbon Limits, GFA Consulting Group (GFA), Kommunalkredit Public Consulting (KPC) and UN Environment Programme's Copenhagen Climate Centre (UNEP-CCC). SPAR6C is a five-year program (2022–2026) funded by the German Federal Ministry for Economic Affairs and Climate Action (BMWK), through the German government's International Climate Initiative (IKI).

About Lead Implementing Partner – Global Green Growth Institute (GGGI)

Based in Seoul, GGGI is a treaty-based international, inter-governmental organization – with over 40 Members and growing – dedicated to supporting and promoting strong, inclusive, and sustainable economic growth in developing countries and emerging economies. With operations in over 30 countries, GGGI serves the role of an enabler and facilitator of Members' transition into a low-carbon green economy, providing policy advice and technical support in the development of green growth plans, policies and regulations, mobilization of green investments, implementation of green growth projects, and development of local capacities and knowledge sharing. Further information on GGGI's events, projects and publications can be found on www.gggi.org.

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Principal Authors

- Paula Macías Díaz, Carbon Limits
- Randall Spalding-Fecher, Carbon Limits

Contributors

- Benjamin Heras Cruz, Carbon Limits
- Manfred Stockmayer, Kommunalkredit Public Consulting (KPC)
- Sylvie Rietmann, Kommunalkredit Public Consulting (KPC)

Reviewers

- Denis Desgain, UNEPCCC
- Marshall Brown, GGGI
- Nicolas Muller, UNFCCC
- Perumal Arumugam, UNFCCC
- Phillip Eyre, UNFCCC
- Urwah Khan, UNEPCCC

Copy-editing by Tim James. Design/layout by James McGregor.
Editorial contributions by Malavika Venugopal, Marshall Brown, Mona Laczo and Yliana Rios.

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Preface: the SPAR6C Article 6 toolbox

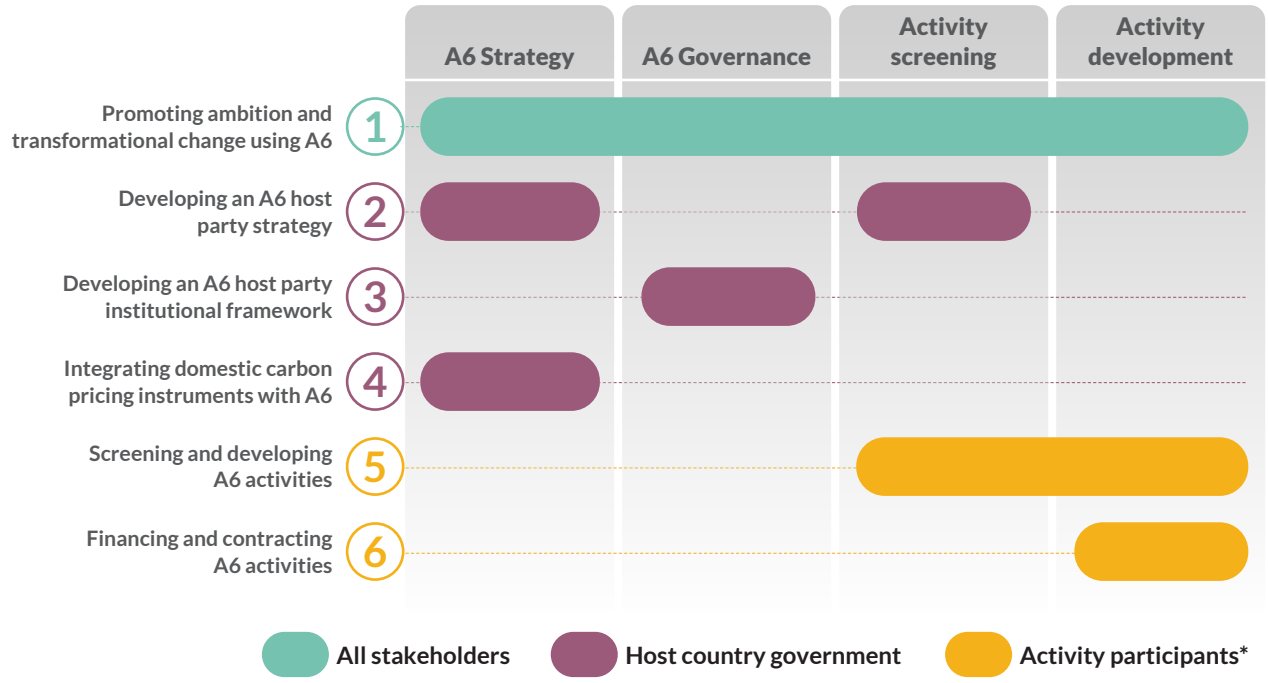
Many developing and emerging economies are keen to pursue carbon transactions under Article 6 of the Paris Agreement in the hope that they will promote ambitious climate change mitigation and generate sustainable development outcomes. However, for countries to be fully prepared to actively engage in the future Article 6 carbon market, there is a steep learning curve. The German Federal Ministry of Economic Affairs and Climate Action (BMWK) through the International Climate Initiative (IKI) supports the *Supporting Preparedness for Article 6 Cooperation* (SPAR6C) program. One of the program's many ambitious goals is to enable partner governments of Colombia, Pakistan, Thailand, and Zambia to become fully prepared to engage in Article 6 transactions.

As part of the program, the "Article 6 Toolbox" draws on the consortium's experience in Article 6 activity development to create guidance and tools that can be used in the target countries and that will make the mechanics of Article 6 implementation better understood. Toolbox development will also promote consistency across countries and efficiency in delivery. A core principle will be the adaptability of the Toolbox to different scenarios to fit the national conditions over the course of the project. The first set of outputs in the Article 6 Toolbox for 2022–2024 is six guides that target the fundamental needs of host party governments, on one hand, and activity participants, on the other hand. The six guides are as follows:

- **Guide 1:** Promoting ambition and transformational change using Article 6 – e.g., long-term strategy support, ITMO cancellation, national eligibility requirements, stringency in baselines.
- **Guide 2:** Developing an Article 6 host party strategy – e.g., accessing opportunities, managing overselling risks, meeting basic Article 6 requirements, criteria for authorization and transfer, developing supporting regulation.
- **Guide 3:** Developing an Article 6 host party institutional framework – e.g., institutional arrangements and procedures for authorization, transfer, tracking and reporting, registry design.
- **Guide 4:** Integrating domestic carbon pricing instruments with Article 6 – e.g., how Article 6 engagement could support or conflict with emissions trading schemes, carbon taxes and other carbon pricing instruments.
- **Guide 5:** Screening and developing Article 6 activities – e.g., guidance of each step in the project cycle, from conceptualization and pre-design, through issuance and transfer of ITMOs.
- **Guide 6:** Financing and contracting Article 6 activities – e.g., negotiating with financing partners, bilateral agreements, contractual issues for selling ITMOs.

Out of the six guides, three cater to host party governments, two are tailored for activity participants (either public or private), and the one on ambition and transformational change encompasses aspects from both areas, as shown in Figure 1.

Figure 1. Overview of scope of the first six guides in the Article 6 toolbox



* Includes intermediaries and financiers.
Notes: A6 = Article 6. CPI = Carbon pricing instrument. The strategy box under "Activity Screening" is for how governments choose to prioritize funding for pilot activities funded by national or international public finance.

Each guide delves deeper into its scope and content, addressing any overlaps with other guides. For example, because institutional arrangements also have strategic importance, the strategy guide (Guide 2) refers to those arrangements. However, this guide on institutional framework (Guide 3) provides a more detailed explanation on this topic.

Future updates of the guides are planned, in 2024 and 2025, and will feature additional case studies from host countries and delve further into activity development. If you have suggestions for these case studies or any other feedback, please email SPAR6CToolbox@gggi.org.

About guide 3: Developing an Article 6 host party institutional framework

Guide 3 supports host parties in developing their institutional framework to implement Article 6 of the Paris Agreement, this being the institutional arrangements through which specific roles and functions will be adopted to authorize, transfer, track, account for, and report the mitigation outcomes. These procedures also require an infrastructure capable of responding to needs such as the recording and maintenance of information, the execution of transfers, and the preparation of reports.

Establishing institutional arrangements can build on existing capacities, so this guide supports readers on how existing capacities can be leveraged based on roles already played under other obligations to the UNFCCC. Likewise, it provides guidance on the key aspects to consider in the development of the draft institutional framework, including, among others, capacity building for all stakeholders involved. This guide provides the basis for host parties to decide whether

to operationalize Article 6 through developing an Article 6 registry, adapting an existing one, or relying on the one provided by the UNFCCC. Finally, the guide addresses the basic elements that a registry must contain in terms of its design and implementation.

This guide is a supporting tool that provides elements for host parties to establish their institutional frameworks. These elements can be taken in whole or in part, depending on the interests, capabilities and level of progress of the host parties in setting up institutions for Article 6.

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Acronyms and abbreviations

CDM	Clean development mechanism
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COP	Conference of the Parties
CPIs	Carbon pricing instruments
DNA	Designated national authority
ETF	Enhanced transparency framework
GHG	Greenhouse gas
IT	Information technology
ITMO	Internationally transferred mitigation outcome
LT-LEDS	Low emissions development strategy
MOs	Mitigation outcomes
MRV	Monitoring, reporting and verification
NDC	Nationally determined contribution
SDGs	Sustainable development goals
UNFCCC	United Nations Framework Convention on Climate Change

Chapter 1

Introduction

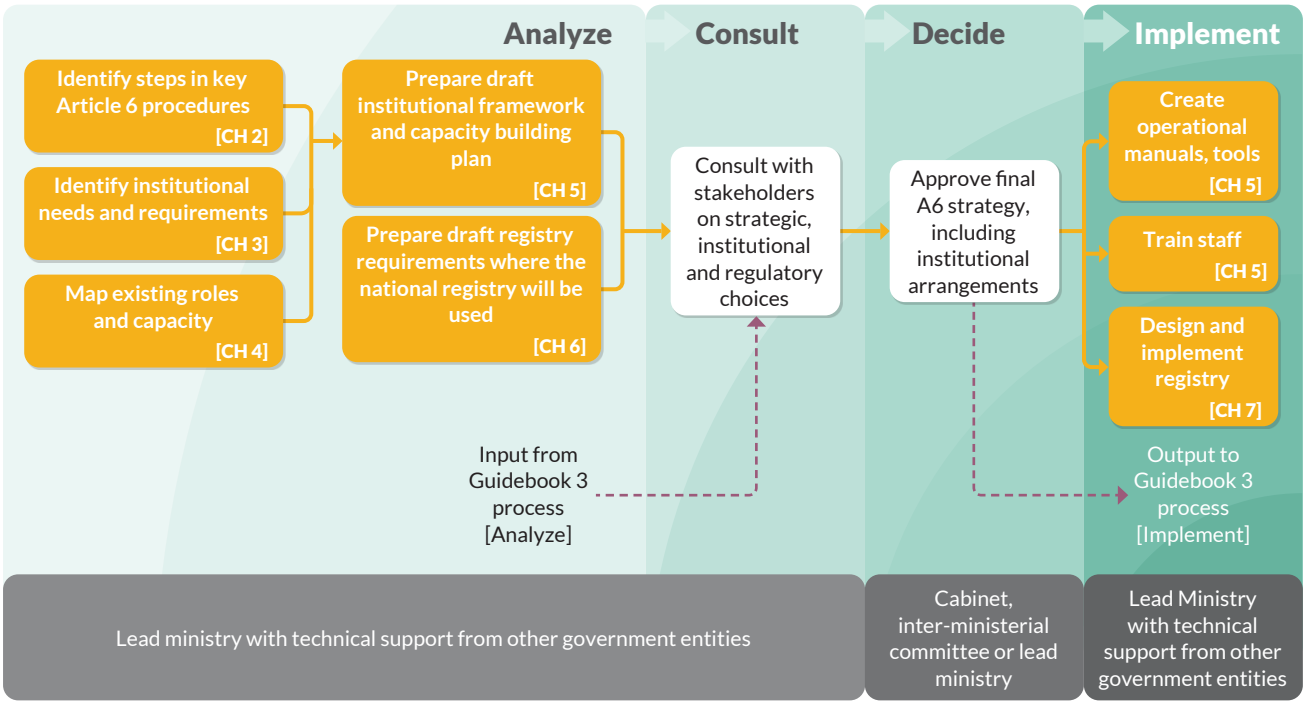
The content of the guide covers the identification of the steps in the key Article 6 procedures (authorization, transfer, accounting and reporting), the identification of needs and requirements to establish roles and responsibilities, the mapping of existing capacity and mandates (i.e., legal framework), the preparation of the draft institutional framework, the development of a capacity building plan, and the setting of draft requirements for the Article 6 registry, mainly.

The terminology that is frequently mentioned for the purposes of this guide is included in Box 1. The introduction explains how Guide 3 relates to Guide 2, with the institutional framework being a key element that is addressed in both guides, deeply developed in this one.

The terms related to institutional bodies used in this guide are introduced to name the types of roles and differentiate the responsibilities of each one in the implementation of article 6: Article 6 policy body, Article 6 executive body, Article 6 administrator and Article 6 technical committee.

This guide supports policy makers in potential host parties engaging in transfers of mitigation outcomes (MOs) under Article 6 of the Paris Agreement. The focus is on the key institutional arrangements and processes – including arrangements for authorizing, transferring and tracking internationally transferred mitigation outcomes (ITMOs) under Article 6. The guide explains how to establish institutional frameworks, based on an assessment of existing capacity, and how to identify gaps that may require new organizational mandates and capacity. In addition, the guide explains how to select, design and implement a registry system to track the generation and transfer of MOs (i.e., emission reductions and removals). Each chapter of this guide fits into the process of analyzing options for setting an institutional framework, consulting and deciding on those options, and implementing institutional arrangements for Article 6 (Figure 2).

Figure 2. Content of this guide



Note: Yellow boxes are the covered milestones of this guide.

Because the guide uses terminology that may not be familiar to many readers, Box 1 presents some definitions of the processes and actors involved in Article 6 engagement, relevant for the understanding of this Guide 3. The roles and actions of activity participants are addressed in Guide 5.

Box 1. Key terminology for Article 6 used in this guide

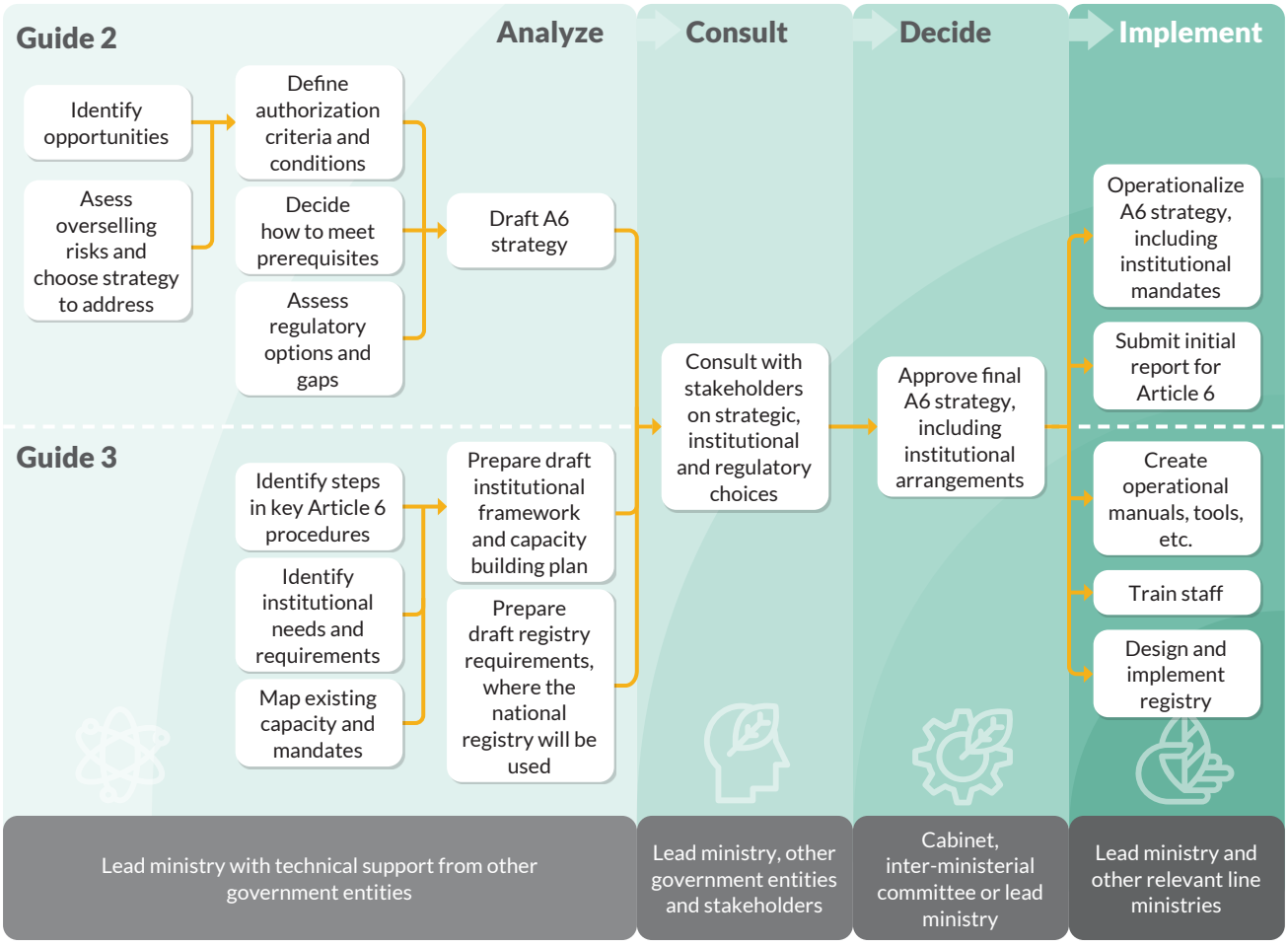
- Accounting: Process that allows comparison of mitigation targets with the progress made (i.e. to understand whether mitigation targets have been achieved), including corresponding adjustments for MOs transferred or acquired.
- Authorization: The host Party's decision to make MOs eligible for transfer to another country or for other mitigation purposes, based on the Article 6.2 guidance.
- Designated operational entity: An accredited third party that conducts validation and verification of mitigation activities under Article 6.4 or the clean development mechanism.
- Registry: A database that records serialized carbon units and any other information specific to a carbon credit, including changes in ownership.
- Tracking: The host party's actions related to collecting, registering, monitoring and maintaining information on transfers of MOs in an Article 6 registry.
- Transfer (of ITMOs): The change of legal ownership of MOs from one party (the country currently with ownership) to another party or another owner (e.g., an international airline under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)).

Box 1. Key terminology for Article 6 used in this guide (*continued*)

- Reporting: The host party providing the required information on all aspects of Article 6 engagement in initial, annual and biennial submissions to the UNFCCC.
- Mitigation outcomes: Emission reductions or emission removals that, when transferred, become ITMOs, regardless of the destination of those transfers.
- ITMOs: MOs transferred for the purpose of nationally determined contribution (NDC) compliance through voluntary cooperation under Article 6, or for other international mitigation purposes e.g., under CORSIA, or for other purposes (e.g., in voluntary carbon markets).

This guide is complementary to the guide on strategy development (Guide 2), in that institutional arrangements are a strategic and essential component of Article 6 readiness. Guides 2 and 3 complement each other on the elements which must be considered in an Article 6 strategy (Figure 3).

Figure 3. How Guides 2 and 3 cover the full range of Article 6 strategy issues



Institutional frameworks are made up of the institutional arrangements and processes through which the Article 6 procedures will be implemented (i.e. authorization, transfer, accounting and reporting of ITMOs). This guide also addresses the necessary infrastructure to operationalize it, which mainly resides in the Article 6 registry.

Establishing Article 6 procedures requires various governmental functions such as coordination, rulemaking and implementation. This guide provides institutional options for implementing the Article 6 procedures.

Finally, by way of introducing the roles and responsibilities for host party governments in Article 6, based on the requirements and international experience, the following general terms are used to describe the different types of institutions that host parties need:

- A high-level "Article 6 policy body" with overall authority for the country's participation in international carbon markets
- An "Article 6 executive body" to develop and approve rules based on existing regulations and institutional mandates
- An "Article 6 administrator" to implement the rules and guidance on a day-to-day basis
- An "Article 6 technical committee", which could include both governmental and non-government representatives, to provide technical advice to the policy, executive and administrative bodies

Why are Article 6 institutional arrangements important?

This section explains why host parties need Article 6 institutional arrangements and shows the benefits of establishing these as early as possible (Figure 4).

Figure 4. The importance of Article 6 institutional arrangements for host parties

- **Meet Article 6 reporting obligations:** Institutional frameworks allow for the compliance of the enhanced transparency framework (ETF) reporting requirements on greenhouse gas (GHG) emissions, progress toward their NDCs, climate change impacts and adaptation, support provided and mobilized, and support needed and received. Indeed, sharing information on authorizations and transfers of ITMOs is essential for the ETF and ensuring the environmental integrity of Article 6 cooperative approaches. Such information includes the application of corresponding adjustments and the emissions balance that reflects the impact of the transfers on NDC achievement. The reporting obligations to the UNFCCC are initial, for communicating tactical decisions to implement the Article 6 strategy; annual, on the transfers of ITMOs and the acquiring parties; and regular, through the biennial transparency report (BTR), reporting corresponding adjustments and emissions balances.

- **Promote activity development, financing and assistance:** Institutional arrangements must include defining roles and responsibilities for making decisions and establishing requirements. Having those arrangements gives a clear signal to potential activity developers that they can go ahead with project development and indicates whom to contact in case of questions and queries. This clarity will make it easier for international buyers to reach out for potential cooperation in Article 6 activity implementation and for international donors to make their Article 6 capacity building activities more targeted and effective.

- **Meet basic requirements of Article 6:** Institutional arrangements are part of the fundamental prerequisites for host countries to participate in Article 6 cooperative approaches. Assigning roles and responsibilities to the institutions allows the host party to be prepared to authorize and execute transfers of ITMOs for different purposes, and also to track, account for, and periodically report on MOs to meet the national goals (i.e. NDC). Institutional arrangements are a core part of an effective Article 6 strategy that promotes institutional coordination and that can be built on existing capacities when appropriate for the parties.

- **Ensure NDC compliance and policy coordination:** Article 6 recognizes that parties can opt for cooperative approaches to meet NDCs. By establishing clear roles and responsibilities in the institutions that coordinate, formulate rules and implement the strategies of Article 6, institutional arrangements support NDC compliance in the long term, since such arrangements ensure that the strategy is effective, functional and appropriate for the achievement of national goals. Adequate institutional frameworks promote coordination among key institutions. They ensure that climate policies are consistent, avoiding technical and regulatory gaps and overlaps, overcoming barriers while simplifying efforts in the tasks.

- **Support coordination with other carbon pricing instruments (CPIs):** The implementation of Article 6 may need inter-institutional coordination for decision-making and with other policy instruments for reducing GHG in various sectors, such as carbon pricing instruments. Institutional arrangements provide a common framework on which to build national mitigation policies with effective coordination and the engagement of various

stakeholders at different levels (governmental and non-governmental). Establishing the institutional framework to effectively implement the Article 6 strategy, to promote synergies with national and global goals, and to meet obligations to the UNFCCC are therefore all important decisions for host parties.

- **Comply with social and environmental safeguards:** Institutional frameworks at the national and subnational levels to create and/or to strengthen social and environmental safeguard systems are needed to ensure that carbon transactions under Article 6 do not have negative effects on the environment and social development. This requires articulation among various sectors, including the justice system and control entities in charge of monitoring human rights violations.

Chapter 2

Identify steps in key Article 6 procedures

Article 6 allows host parties to voluntarily cooperate with other countries in achieving their climate goals through a framework for international transfer of MOs. This requires the implementation of the Article 6 procedures that imply certain steps by the host party, which need to take on institutional responsibilities. The procedures and related steps are:

Authorization

- Request authorization of MOs from the activity participant
- Evaluate request for authorization against existing national rules
- Authorize the MOs
- Enter details of the authorized MOs into a national authorization database

Transfer

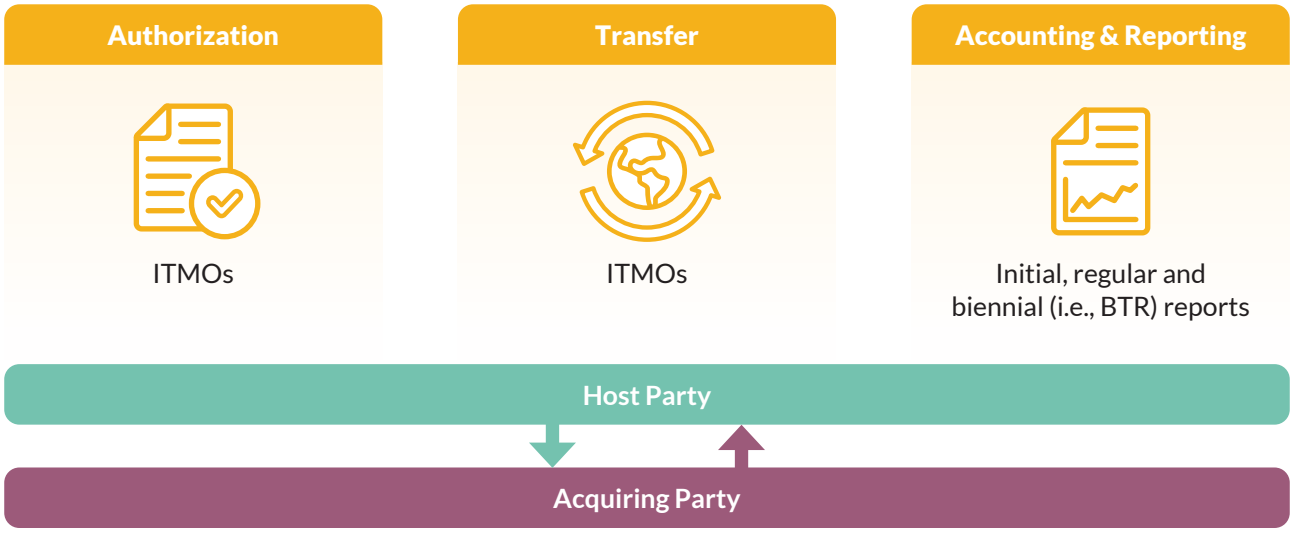
- Request international transfer of MOs from the activity participant
- Check the request for transfer against the terms of the authorization, as well as any other national rules on ITMO transfers
- Approve the transfer under the country-specific terms or conditions
- Execute the first transfer (i.e. the initial transfer from the host party) of ITMOs by recording all the details of the transfer in registries

Accounting and reporting

- Identify reporting requirements
- Compile data on ITMO authorizations and transfers
- Apply corresponding adjustments and prepare emissions balances with inventory and transfers
- Prepare and submit annual and regular reports

Figure 5 Illustrates the key processes for Article 6 and the engagement of host party and acquiring party in those.[1] The institutional options for these processes are explained in sub-chapter 5.1.

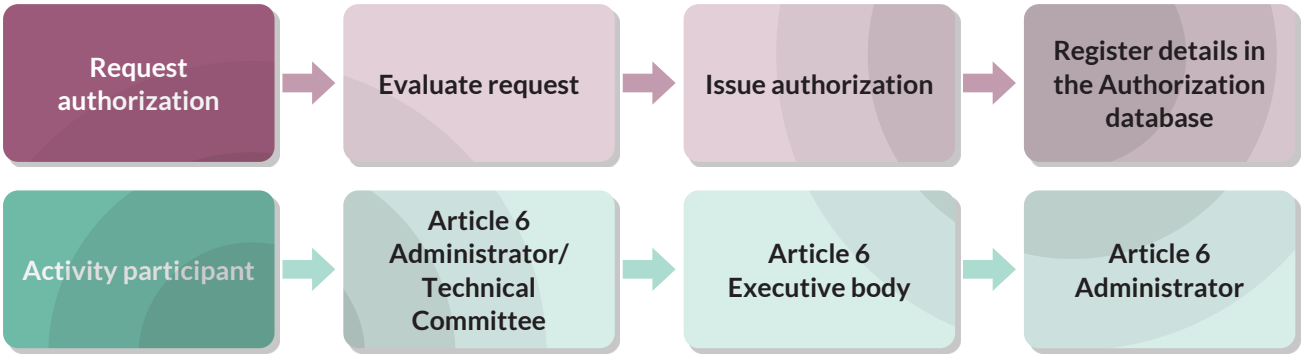
Figure 5. Processes related to Article 6



2.1 Authorization

Authorization is the host party's decision to make MOs eligible for transfer to another country or for other mitigation purposes, based on the Article 6.2 guidance. In addition, in what is a confusing use of terms, Article 6.4 rules require that host parties "authorize" activity participants to develop an Article 6.4 mitigation activity – but this is not the same as the authorization of MOs for transfer. Where "authorization" is used in the guide, it refers to MOs for transfer. Authorization is separate from the Article 6.4 requirement to approve activities prior to registration. As part of the strategy development process described in the "Guide 2 to developing a host party Article 6 strategy", the government will decide on the conditions and criteria for granting authorization (see chapter 4 of Guide 2 for further information on authorization criteria). Figure 6 shows the relevant milestones in this process and who is responsible, while the following sections explain the steps in more detail.

Figure 6. Overview of authorization procedure



2.1.1 Request authorization of MOs

The activity participant requests authorization of MOs generated by the mitigation activities, either before or after the monitoring, reporting and verification of those activities. Even if the activity participant is a public sector entity (e.g., national utility or ministry implementing a large-scale mitigation activity), it would still need to request authorization from the particular government authority that is mandated to provide it.

Authorization is more likely to be *ex ante*, (i.e. before the mitigation activity has been implemented and the emission reductions verified) than *ex post*, because the activity participants are unlikely to invest without some certainty that they will be authorized to sell MOs.[i]

The activity participant provides evidence of the compliance of the authorization requirements (i.e. documents). Means of verification of requirements that may be requested under Article 6 cooperative approaches to demonstrate the implementation of a mitigation activity are shown in Table 6 of Guide 2.

2.1.2 Evaluate request for authorization against existing national rules

The host party evaluates the request for authorization against the established authorization criteria and against any other applicable regulations in the country (see Guide 2 Chapter 4 on authorization criteria). The activity participant must comply with the requirements established by the host party[ii] for these purposes as part of the Article 6 strategy (see Guide 2 for details on establishing these criteria). Host parties would decide and communicate these requirements after finalizing their strategy.

Host parties may decide to communicate the authorization requirements on a website, or in media where it can be efficiently disseminated. The official publication should be available to the public so that interested activity participants can know about them. The publication should be clear about what evidence is needed to prove that mitigation activities are eligible for the purposes of the Article 6 strategy and the procedure of evaluation of request.

The procedure of evaluation should indicate how the authorization request must be made (i.e., physical, post mail, or electronic), the time frame in which the process is carried out, and any other specification or instruction for the issuance of authorization. The procedure should also describe the steps to be taken if the authorization is rejected.

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i The timing of authorization and what type of early acknowledgement host parties may provide for activities, is still under discussion. While some countries (e.g., Ghana and Switzerland) have already publicly announced ex ante authorizations, some experts point out that, since ITMOs must be "verified", authorization might only formally be able to happen after the mitigation outcomes are generated. This ex-ante action from the host party could potentially be called 'pre-authorization', but this term does not appear in the Article 6.2 guidance.

ii That include criteria required in Article 6.2 guidance (Decision 2/CMA.3) and Article 6.4 rules (Decision 3/CMA.3) (e.g., environmental integrity, avoid leakage, contribution to NDC, among others); criteria to capture national priorities and opportunities (e.g., support for LT-LEDS, compliance with other relevant regulations or policies, compliance with anti-corruption laws, among others); criteria to address high and low risk of overselling (i.e., negative list and positive list); and conditions based on managing activity types with "medium" risk of overselling (e.g., baselines derived from NDC goals, cap on transfers, sharing of MOs, among others).

While the administrator will conduct a completeness check on the submission, the technical committee will likely need to review the material as well, depending on the criteria and requirements. The host party draws up the completeness check and other supporting tools according to the authorization requirements, in order to make the checks and the recording of the relevant information easier. Supporting tools could include checklists and authorization letter templates, as addressed in the next section. This review should confirm that the mitigation activity is aligned to the host party's Article 6 strategy.

2.1.3 Authorize the MOs

The host party authorizes or rejects the MO depending on how it complies with established requirements. The letter of authorization is a document addressed to the activity participant that supports the claim that the mitigation activity generates, or is able to generate, MOs in terms of tons of CO_2 or CO_2e.

The authorization letter could authorize ITMOs for:

- NDC compliance purposes
- Other international mitigation purposes (as opposed to authorization for use for NDCs)
- Other purposes (i.e., corporate buyers in the voluntary carbon market)

The evaluation may conclude that the requirements are not met. In this case the host party issues a negative statement indicating the requirements that were not met. When the evaluation of the authorization request is completed, the host party issues a document giving its conclusion on the evaluation and specifying the terms and conditions under which the resolution is issued (Box 2).

Box 2. Example of content of letter of authorization and rejection of request

Letter of authorization	Request for changes to the authorization request[iii]
• Data that legally identifies the activity participant • Date on which the request was submitted • Sector and technology of the mitigation activity • Geographic location of the mitigation activity	• Data that legally identifies the activity participant • Date on which the request was submitted • Reason(s) for requesting changes • Notification of activity participant

(continued)

iii There is still no clear indication on how to directly address cases where an authorization request does not fully meet the established criteria/requirements. Authorization changes are under discussion in the frame of international negotiations.

Box 2. Example of content of letter of authorization and rejection of request (*continued*)

Letter of authorization	Request for changes to the authorization request
• Expected sustainable development outcomes of the activity • Period in which the mitigation activity is implemented and whose MOs authorization are requested • Tons of GHGs for which authorization is issued • Conditions under which the designated national authority issues authorization (MOs transfer terms may be included) • Signature or seal of the authority issuing the authorization and the validity of the authorization	

Box 3. Appeals and grievances

As part of the authorization process, many parties may choose to include a procedure to handle appeals and grievances. These may come from any interested party and could address complaints about situations such as:

- Request for changes to the authorization request
- Penalties for non-compliance with the Article 6 policy framework by activity participants
- Amendments to any letters of authorization (e.g., request of changes of authorization terms and conditions)
- Performance of a verification body
- Any suspected non-compliance of an activity under a cooperative approach

In most cases, the main interested party could be the activity participant. However, the appeal can come from any affected party if any non-compliance arises in the implementation of the mitigation activity or in the actions of the regulators or auditors.

While a grievance is the expression of dissatisfaction during a procedure by any interested party with respect to a decision made by the Article 6 policy body, the Article 6 executive body, the Article 6 administrator, or even an auditor, an appeal is also a request for amendment of an unsatisfactory statement. Letters of appeal and grievances may be directed, formalized, and handled by the Article 6 administrator.

2.1.4 Enter details of the authorized MOs into a national authorization database

The authorization process is documented from the submission of an authorization request to the issuance of the authorization. The government records the information provided by the activity participant in a national Article 6 activity database to ensure that all information needed for future Article 6 reporting is collected and stored securely.

The following information would be the minimum that should be entered in the database:

- Date of receipt of the authorization request
- ID provided by the authority upon receipt
- Name and legal identity of the activity participant
- Activity type and sector
- Geographic location of the mitigation activity
- Acquiring party
- Beneficiaries of the mitigation activity
- Expected sustainable development outcomes of the activity
- Period for which authorization is requested
- Volume of emission reductions authorized

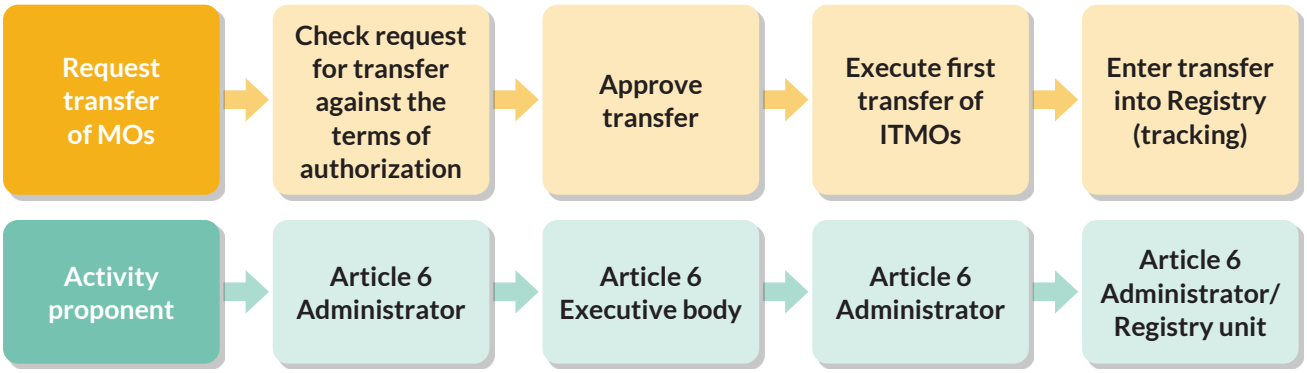
There may be non-public information to be registered to facilitate follow-up to the requests received and to improve internal procedures in the long term. Note that keeping records of rejected requests could contribute to identifying bottlenecks in the process. The non-public information could include the name of the person who evaluated the request (i.e. Article 6 administrator) and specification of requirements not met.

The tools and system used for these purposes (i.e. national Article 6 activity database) could allow the corresponding files to be attached for each requirement to be met in the authorization procedure. See chapter 7 to find more information on the Article 6 registry.

2.2 Transferring and tracking

Transfer is when ITMOs authorized by the host party are moved from the registry account of the host party to the account of the acquiring party or other entity acquiring the ITMOs (e.g., international airlines under CORSIA). During the transfer process, parties must comply with the guidance on accounting to ensure that double counting is avoided. Article 6.4 emissions reductions that are authorized for use by another country are also transferred as ITMOs in the same process. This section explains the steps for transfers that are shown in Figure 7.

Figure 7. Transfer process



Countries may also require issuance of MOs as an intermediate step prior to the transfer of MOs. The need for this will depend on domestic carbon markets and other potential domestic uses of MOs (e.g., if not necessarily all units issued will be transferred).

The host party should ensure that the mitigation activity was implemented according to the authorization requirements. Although the authorization of MOs may occur *ex ante* or *ex post*, transfers can only occur after implementation and verification of the performance of the mitigation activity (see Guide 5).

2.2.1 Request international transfer of MOs

Based on the compliance with authorization criteria and conditions, the host party transfers MOs, as described in chapter 4 of the Guide 2. The activity participant submits a request for transfer of MOs as indicated by the host party. The terms and conditions for the transfer must be duly communicated in the authorization letter.

Two essential requirements for making a transfer are:

- Letter of authorization of MOs
- Final verification opinion that certifies the tons of CO_2 or CO_2e that were reduced or removed by the mitigation activity

The activity participant must ensure that the MOs for which the transfer is requested correspond to those that were authorized. If the authorization has been issued *ex ante*, the mitigation activity may generate fewer MOs than expected. The verification report should present the quantity of MOs achieved as the basis for this request. In the case of *ex-post* authorization, the request for authorization would be submitted simultaneously with the request for transfer.[2] The activity participant must submit the request, along with all required documentation either physically or electronically, to the designated Article 6 authority (i.e. lead ministry, as discussed in chapter 3).

2.2.2 Check the request for transfer against the terms of the authorization, as well as any other national rules on ITMO transfers

The host party reviews the documentation from the request for transfer. If the authorization is issued *ex ante*, the government will need to confirm that any requirements in the letter of

authorization were met (e.g., successful verification by an accredited third party). The final verification report is key to confirming whether the verification activity was implemented as planned and that the mitigation was achieved.

If the activity participant requests authorization *ex post* and at the same time as requesting transfer, the host party will first go through the authorization process, with the relevant assessments, before assessing the request for transfer. That assessment would not require additional review other than to confirm that the mitigation activity details and activity participant were all correctly specified, and that the activity participant submitted the final verification report.

The number of MOs approved for transfer must not exceed the verified MOs or the volume stated in the original authorization letter.

2.2.3 Approve the transfer under the country-specific terms or conditions

The host party approves transfer to the activity participant once the check has been completed. If the check confirms that the terms and conditions have been fully complied with by the activity participant, the host party issues a document that approves the transfer of MOs.

The transfer approval document endorses that the mitigation activity was executed properly and in accordance with the monitoring, reporting and verification (MRV) requirements. It certifies the generation of MOs eligible for international transfers within a specific crediting period.

If the check shows that the requirements were not fully complied with by the activity participant, the host party rejects the request for transfer. In this case, the document states that the transfer request was not complete and specifies the non-compliant aspects.

2.2.4 Execute the first transfer of ITMOs by recording all the details of the transfer in registries

When the activity participant has the approved transfer of ITMOs, the first transfer can be executed through the registry. The host party records the relevant information in the national and international registries for proper tracking (chapter 7).

The registry generates evidence that the ITMO transfer took place (e.g., through generating a unique serial number). The transfer of MOs then is reflected in the registry accounts of both the host party and the acquiring party.

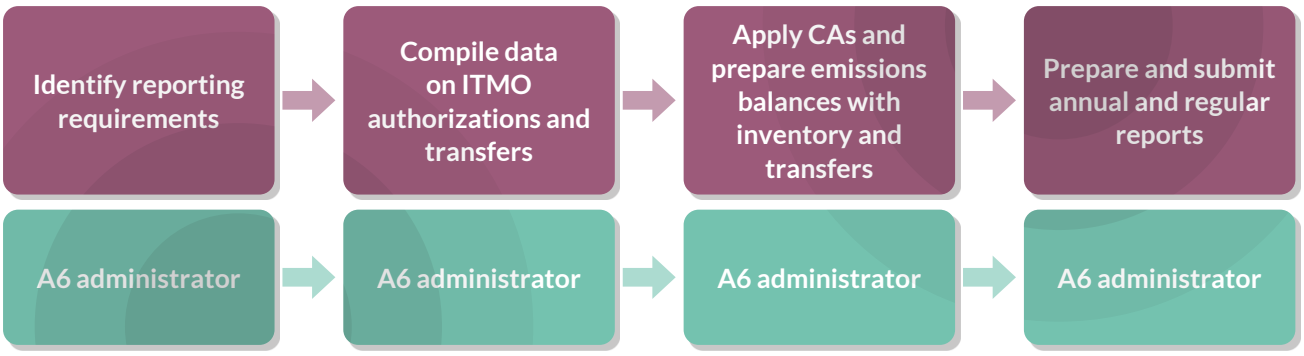
2.3 Accounting and reporting

Accounting is a key aspect in implementing Article 6 to prevent double-counting and ensure environmental integrity. Accounting supports proper reporting of MOs and activities and also ensures that MOs are not double-counted, by implementing corresponding adjustments. In terms of reporting, countries participating in the Paris Agreement and in Article 6 are required to present initial, annual and biennial reports on Article 6 activities. The initial

report confirms that participating parties meet the necessary requirements to participate in Article 6.2 cooperative approaches. Host parties must submit this report no later than their first authorization of ITMOs. The annual report provides extensive detail about ITMOs: authorizations, transfers, acquisitions, holdings, and cancellations; the use for NDCs and information on the cooperative approaches. The "regular information" is part of the BTR and should include updates of the information provided in the other reports. More importantly, it must also include the "structured summary" that shows how corresponding adjustments have been applied. Box 4 summarizes those requirements.

The overall process of accounting and regular reporting is summarized in Figure 8.

Figure 8. Accounting and reporting process



Box 4. Summary of reporting requirements under Article 6.2

Initial report

Policy decisions on readiness stage

Communicating tactical decisions:

- Fulfillment of participation requirements
- Quantify NDC in specific metrics
- Communicate ITMO metrics and method for corresponding adjustments (CA's)
- Description of each cooperative approach

Annual report

ITMO authorization, transfer & use

Report information on:

- ITMO authorization for NDCs and for other international mitigation purposes
- First transfer, transfer, acquisition, holdings and cancellation
- Use of ITMOs towards NDCs and OMGE
- Voluntary cancellation of ITMOs
- Transferring Party for each activity

Biennial Transparency report

Regular Information

Report Information including:

- Application of CA's to covered NDC GHG inventory (or other metric) to show adjusted "emissions balance"
- Specific information relative to each cooperative approach
- Structured summary Including an emissions balance

2.3.1 Identify reporting requirements

Host countries must identify the requirements for each of the initial, annual and biennial reports to the UNFCCC, its specific content and scope, especially for annual and regular reports as its elaboration becomes a systematic activity (Table 1). Those requirements are mainly oriented to ITMO authorizations and transfers, their impact on NDC and national inventories, participation in cooperative approaches, and implementation of mitigation activities. Host countries must plan reporting activities from the data collection to the submissions.

Table 1. Requirements for UNFCCC reporting on Article 6 activities[3]

Milestone	Initial report	Annual report	Biennial report
Fulfilment of participation requirements/responsibilities	●		
NDC-related information	●		
ITMO metrics and the method for corresponding adjustments for single-year or multi-year NDC targets	●		
Information for each cooperative approach	●		
Authorized ITMOs		●	
First transfer, transfer, acquisition, holdings, cancellation		●	●
ITMO's use towards NDC		●	●
Authorization of ITMOs for use towards other international mitigation purposes		●	●
Voluntary cancellation		●	
ITMOs used for other international mitigation purposes		●	
The cooperative approach	●	●	
First transferring participating party and using participating party		●	
For each activity: Year in which the mitigation occurred, sector(s), activity type.		●	
Unique serial numbers		●	
Updates to the information (initial report and any previous BTRs)			●
Corresponding adjustments regarding the progress towards implementation and achievement of its NDC			●
ITMOs acquired and will not be further transferred, cancelled or otherwise used.			●

(continued)

Milestone	Initial report	Annual report	Biennial report
Detailed information of each cooperative approach (i.e. contribution to NDC; promotion of sustainable development; environmental integrity: transparency and governance; how double-counting is avoided; co-benefits)			●
The annual level of anthropogenic emissions covered by the NDC on an annual basis reported biennially			●
An emissions balance reflecting the level of anthropogenic emissions covered by its NDC and corresponding adjustment for transfers			●
Any other information consistent with decisions adopted by the CMA on reporting under Article 6			●

2.3.2 Compile data on ITMO authorization and transfer

The initial report communicates strategic decisions on Article 6 participation to the UNFCCC and does not require the compilation of information from ITMOs. Some countries may choose to update their initial report as they finalize their strategy or add more cooperative approaches. For annual and regular (i.e., biennial) reports, it is necessary to collect current information on the authorization, transfers, use and cancellation of ITMOs (based on Table 1). Likewise, for the regular report, it is necessary to report in detail the application of corresponding adjustments as well as the emission balances that reflect the impact on the transfers on the host party's NDCs, specifying the cooperative approaches under which the ITMO transfers took place.

These tasks are more likely to be carried out by technical or administrative personnel (i.e., Article 6 administrator), since they should be personnel with the skills to utilize the database and the Article 6 registry to extract and interpret information. Likewise, this task will require coordination with the team in charge of developing the NDC GHG inventory (i.e., meaning that host party is reporting NDC progress in GHG metrics), who together should collaborate in the application of the corresponding adjustments to the national inventory and the development of the emissions balance, so that it is accurate and verifiable.

The information gathering process must be on an annual basis to respond to the needs of the annual report, which will allow responding at the same time to the demands of the regular report under the framework of the BTR. However, the application of the corresponding adjustments and the preparation of the emission balances will be carried out every two years. Therefore, the host party should have an internal procedure that allows it to cover the information demands for each report, assigning the responsibilities of the areas involved.

2.3.3 Prepare emission balances

This section applies to the preparation of regular reports (BTRs), since these must report the application of corresponding adjustments and present the emission balances that reflect the impact of ITMO transfers on the national inventory of the host party.

The accounting of transferred ITMOs should be recorded in the Article 6 registry, so that information can be tracked and extracted through this registry (information about the acquiring party, the number of transferred ITMOs and corresponding serial numbers, and the information regarding the mitigation activity that produced the ITMOs).

On the other hand, the host party must have a national emissions inventory that specifies the sources of GHG emissions and removals, in line with the enhanced transparency framework.

Box 5. The national GHG inventory under the enhanced transparency framework

Article 13 of the Paris Agreement outlines the transparency framework for reporting and reviewing the progress made towards achieving the goals of the agreement. The first point of the outline of the transparency framework is the reporting requirements. Countries are required to regularly report on their GHG emissions, progress towards their NDCs, and the implementation of their climate policies and measures.

The Annex to Decision 18/CMA.1 provides the requirements for the national inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases.

Update GHG inventory using methods from the 2006 IPCC Guidelines

- Include institutional, legal and procedural arrangements for the continued estimation, compilation and timely reporting of national inventory reports
- Develop an inventory QA/QC plan including the inventory agency responsible for implementing QA/QC and report the general inventory quality control procedures
- Identify key categories for the starting year and the latest reporting year
- Use the 100-year time-horizon global GWP values from the IPCC Fifth Assessment Report, or from a subsequent IPCC assessment report to report aggregate emissions and removals of GHGs, exoressed in CO_2 eq.
- To ensure time-series consistency, use the same methods and a consistent approach to underlying activity data and emission factors for each reported year
- Provide information on methods and cross-cutting elements
- Estimation of the uncertainty of the emission and removal estimates for all source and sink categories, at least for the starting year and the last reporting year of the inventory time series
- Provide disaggregated information on sectors and gases including trends with emissions by sources listed separately from removals by sinks
- Assessment of completeness to indicate sources and sinks that are not considered in the national and explain the reasons for such exclusion
- Report a consistent annual time series from 1990 or the reference year/period for its NDC and a consistent annual time series from at least 2020 onwards

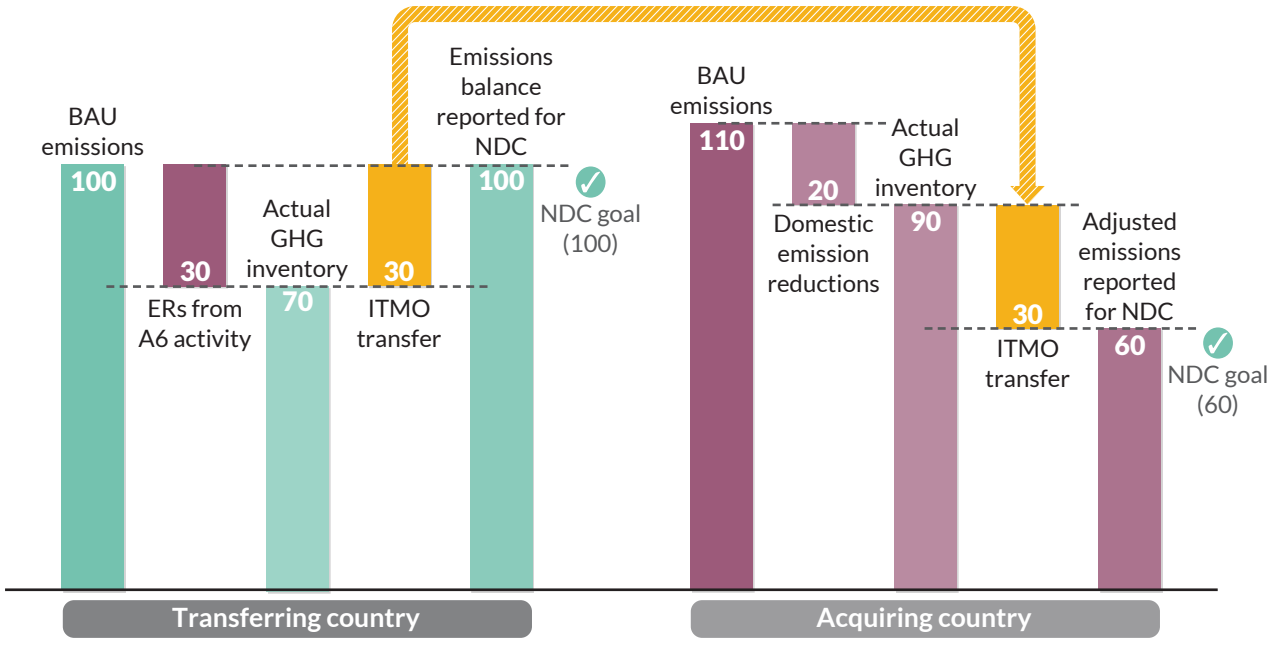
When the information is available, a technical team (i.e. Article 6 administrator) must apply the corresponding adjustments to the transferred ITMOs. Applying corresponding adjustments requires the transferring host party to add back the amount of ITMOs transferred to the emissions balance it reports to the UNFCCC.[4]

Box 6. Understanding corresponding adjustments

The rules for transferring MOs under Article 6 ensure that these outcomes are not counted by more than one country by requiring "corresponding adjustments" for all transfers. This means that the transferring country (i.e., the host party) adds back the amount on the ITMO transfer to its NDC GHG inventory[iv] to create an "emissions balance" that is compared to the NDC goal. Conversely, acquiring countries *subtract* the ITMOs transferred from their NDC GHG inventories when creating their emission balance. In other words, the acquiring country can only use the ITMOs to reach its NDC goal when the host party does *not* use those MOs for its own goal. The same applies to ITMOs authorized for other international mitigation purposes.

The figure below shows an example where a cooperative activity that reduces emissions by 30 units is used as the basis for an ITMO transfer. In this case, the host party still meets its NDC goal because, even after adding back the 30 units transferred to the GHG inventory, the emissions balance of 100 is the same as the host party's goal. The acquiring party is also able to meet its goal of 60 units even though its GHG inventory is 90 units, because the acquisition of ITMOs for 30 units is subtracted from the inventory, which leaves an emissions balance of 60 units. If the host party's goal had been 90, however, then the transfer would have led the country to miss its NDC pledge even though its actual GHG inventory was below that level of emissions.

Figure 9. Example of corresponding adjustments

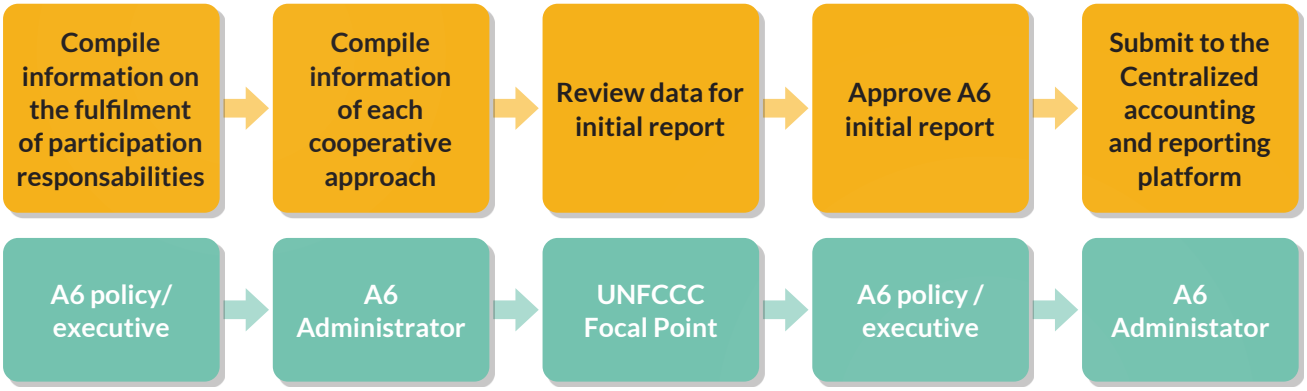


iv This is for countries that are reporting progress towards their NDC goals in units of GHG emissions, which is likely to be the case for most goals for most countries.

2.3.4 Prepare an initial report

The initial report is aimed at communicating to the UNFCCC the strategic decisions made for implementing the Article 6 strategy (Figure 10). For preparing this report, the host party must collect information about how the participation requirements are met, as well as about each cooperative approach. The draft report undergoes a review (by the UNFCCC focal point), then approved by the high-level decision body (Article 6 policy body or Article 6 executive body) and submitted to the centralized accounting and reporting platform.

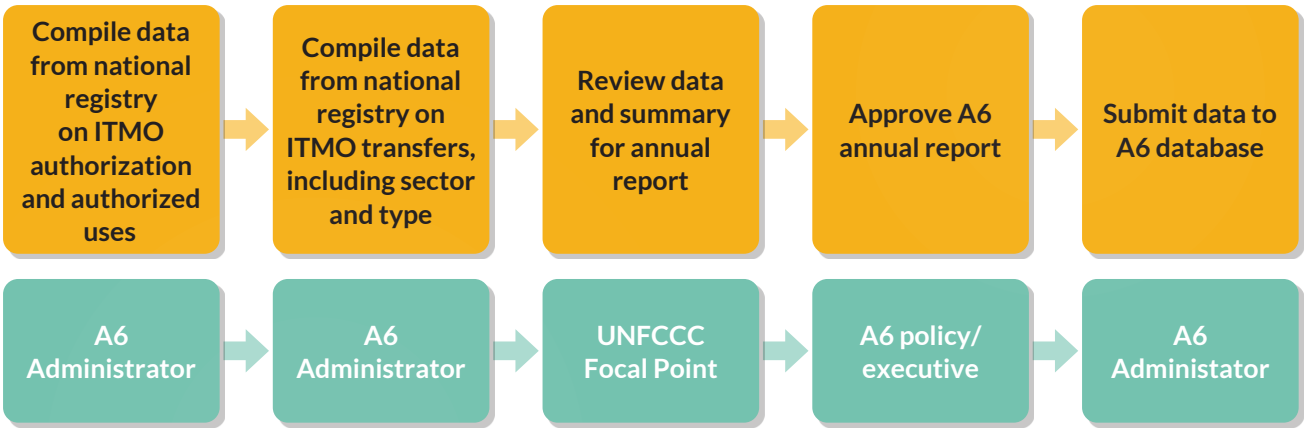
Figure 10. Initial reporting process



2.3.5 Prepare an annual report

The annual report focuses on information regarding authorizations and transfers (Figure 11). The process of preparing this report includes gathering information, data review (probably done by the UNFCCC focal point), followed by approval and submission to the Article 6 database.

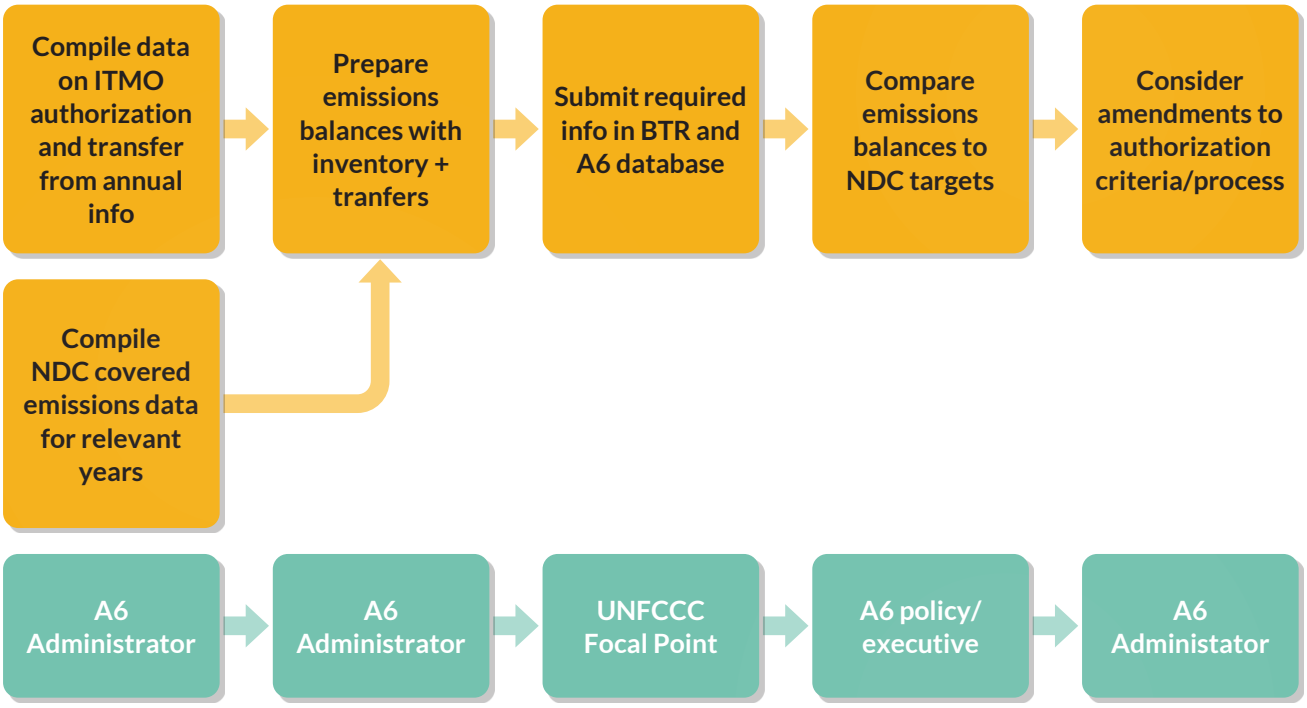
Figure 11. Annual reporting process



2.3.6 Prepare a regular information report

The regular report is part of the biennial transparency report and entails compiling information from the annual report (on authorizations and transfers of ITMOs), and the information on the emissions covered by the NDC to later prepare the related emission balances. This report is also sent to the Article 6 database. Subsequently, the emissions balance is compared with the NDC targets. Based on the results obtained, authorization criteria may be amended.

Figure 12. Regular (i.e., biennial) reporting process



Chapter 3

Identify institutional needs and requirements

Host parties can choose which institutions will carry out the functions required for the implementation of Articles 6.2 and 6.4 of the Paris Agreement,[v] which means to properly run the procedures shown in chapter 2. Some functions are basic, while others are optional; likewise, there might be different institutions that take responsibility for them, whether inside or outside the government. Understanding the functions allows host parties to setup the institutional arrangements and assign the roles and responsibilities for Article 6 (Box 7).

Based on the requirements of the Article 6 rules, previous experience under the CDM, and current practice in managing international carbon markets, host parties will need to address the following functions:

- Coordinating policy
- Formulating rules
- Implementing rules
- Providing technical advice
- Auditing

Moreover, it is possible for the host party to rely on elements from international crediting mechanisms that offer significant opportunities for implementing national Article 6 frameworks, in order to speed up implementation, reduce expenses and strengthen credibility.

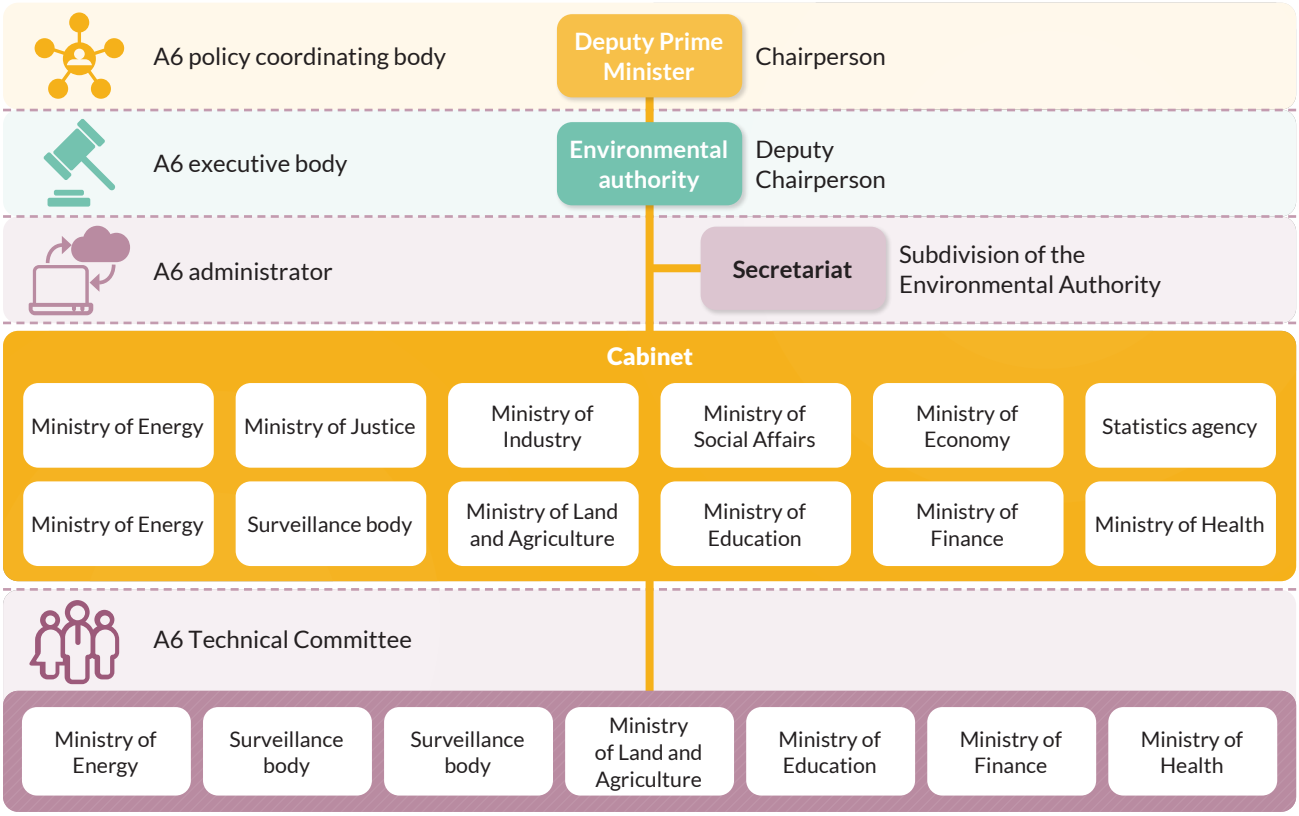
3.1 Defining institutional arrangements

Institutional arrangements for Article 6 should be established at different levels: cabinet for coordination and decision-making, ministerial for developing rules and oversee, and departmental to cover the implementation (mostly administrative) functions required. The possibility of promoting inter-institutional cooperation to achieve the objectives should not be underestimated, since it can help to simplify the processes through the appropriate synergies.

For illustrative purposes, to introduce the main roles, Figure 13 shows an institutional arrangement model for Article 6 based on the required functions discussed in sub-chapter 3.2.

v The host party shall ensure that it has arrangements in place for authorizing the use of ITMOs towards achievement of NDCs pursuant to Article 6, paragraph 3.

Figure 13. Example of institutional arrangements for Article 6



The figure shows how an institutional arrangement for Article 6 could be established at different levels:

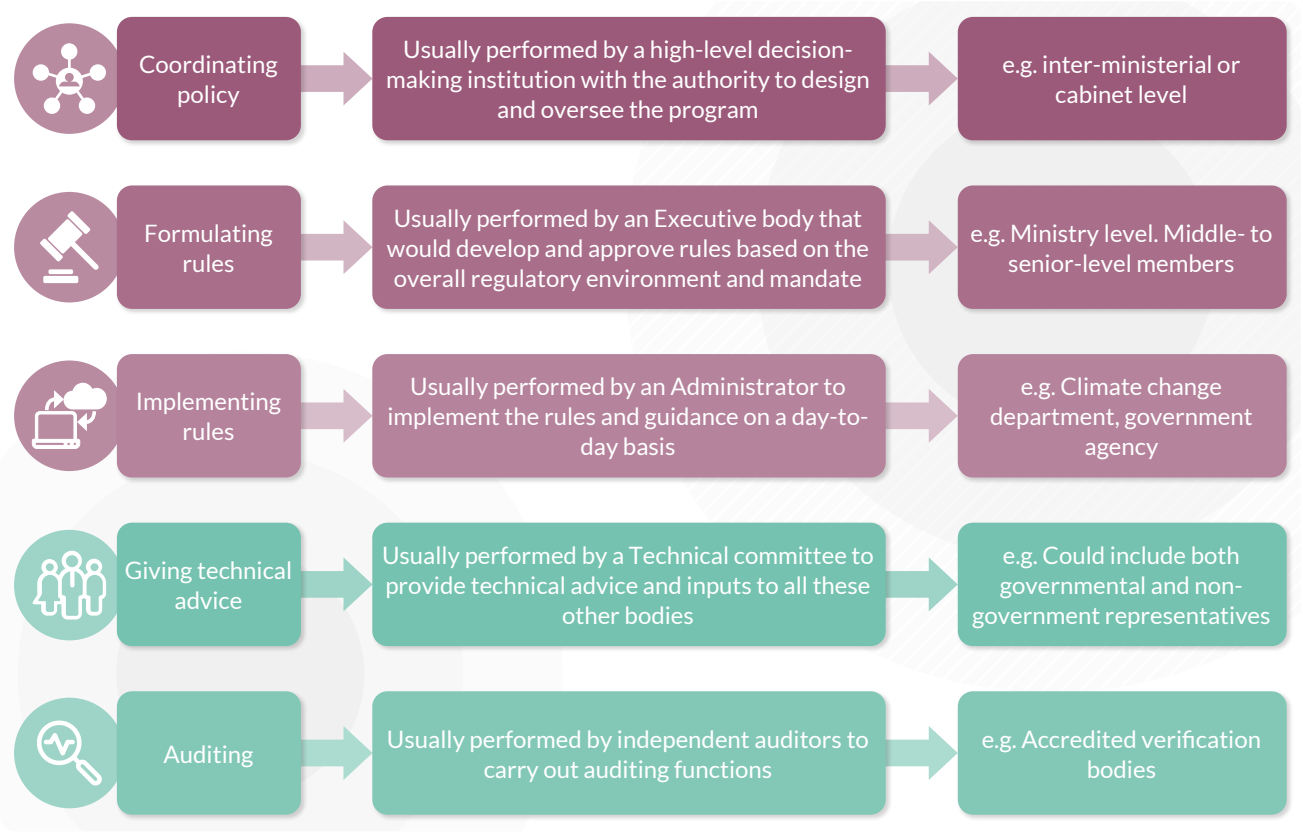
- Policy coordination body based on an authority at the highest levels of the national government, such as a prime minister, that would preside over policy coordination.
- Environmental authority acting as the executive body of Article 6, and in turn as deputy chairperson within the policy coordination body.
- Subdivision of the environmental authority in the third level represented by a secretariat in political coordination, being in turn responsible for the implementation of Article 6.
- Cabinet members as part of the policy coordination actors (e.g., ministers or senior officials within ministries), and from which a technical committee could be formed.
- The technical committee for giving advice could be made up of representatives of various parts of society, such as research institutions, civil society, the private sector (i.e. activity participants), economic sectors (i.e. industrial and others), environmental agencies, prosecutors, ombudsmen, and others that the country identifies as information providers and experts for the purposes of assessing Article 6. Technical committees can also form working groups for specific purposes.

See Box 13 for the example of setting up the institutional frameworks for implementing an Article 6.2 approach in Ghana.

3.2 Functions required for Article 6.2

Host countries first need to identify the requirements of Articles 6.2 and 6.4 in the context of their existing institutions and policies and set up institutional arrangements accordingly. This includes the functions to be carried out by government as well as the functions that might involve non-governmental actors. Some functions are required by the Article 6 rules, while others are optional. Figure 14 shows the types of functions as well as the roles and types of institutions or bodies that usually perform those functions. Different colors show those that are government-based and those that are not. Box 7 gives more details on the functions required.

Figure 14. Types of functions for Article 6[5]



Box 7. Types of functions required to implement Article 6

Functions staffed primarily by government

Coordinating policy: This means responsibility for high-level decision-making regarding the Article 6 strategy. The body carrying out these functions would ensure that the strategy supports the objectives of the NDC and is coordinated at inter-ministerial level where required (i.e. an Article 6 policy body). Such a body would also evaluate the Article 6 strategy, communicate results, and periodically implement governance updates.

Box 7. Types of functions required to implement Article 6 (*continued*)

Formulating rules: This refers to authorizing the MOs based on the established strategy and guaranteeing the environmental integrity of the overall Article 6 approach. To do this, a body tasked with these functions must oversee the Article 6 market, including: ensuring that activity participants meet established criteria; supervising auditors; complying with reporting obligations to the UNFCCC; managing NDC compliance, ensuring compliance with social and environmental safeguards as well as preventing human rights violations. All these functions might be established at a ministerial level (i.e. in an Article 6 "executive body") to integrate the perspectives and authority of relevant authorities.

Implementing rules: These functions include performing the administrative tasks that are essential to operationalize Article 6 and achieve the objectives of the host party. This would include execution of transfers (which involves the management and administration of the Article 6 registry) and collection and analysis of information for the preparation of reports (i.e. annual and regular). The performance of these functions requires supervision by the body tasked with formulating rules.

Functions staffed primarily outside of government

Technical advice: this refers to providing high-level expertise and knowledge to carry out assessments and analyses related to the implementation of the Article 6 strategy, including the implementation of social and environmental safeguards. This would include generating inputs for analyzing MOs and their contribution to the NDC, the relevance and effectiveness of methodologies, and methods for assessing additionality, among others. While some expertise may be sourced from government policy experts, the majority would primarily come from other sectors such as the private sector, civil society and academia. Additional functions could include developing, updating or proposing a negative list of activities (i.e., activities that would not be authorized for Article 6 transactions).

Auditing: This third-party function is to validate the design and verify the performance of mitigation activities based on the relevant methodologies and standards. Verification is a requirement for any transfer of MOs under the Article 6 rules. This function is covered by accredited bodies that meet national and/or international accreditation standards to ensuring impartiality in the process.

In relation to the procedures discussed in chapter 2, Figure 15 and Figure 16 show the functions that need to be performed for Article 6.2, according to their type. Article 6.2 provides the basis for countries to participate in cooperative approaches. The Parties to the Paris Agreement agreed in 2021 on guidance for Article 6.2 cooperation, including the participation and reporting requirements. The Article 6.2 guidance also specifies how to account for the international transfers and avoid double-counting by making corresponding adjustments.

Functions are differentiated into those that must be integrated into government institutions and those that can be performed by external organizations.

Note that government-based functions cover coordinating policy, formulating rules and implementing rules, while non-governmental functions cover giving technical advice and auditing.

Figure 15. Minimum functions to be performed for Article 6.2[6]

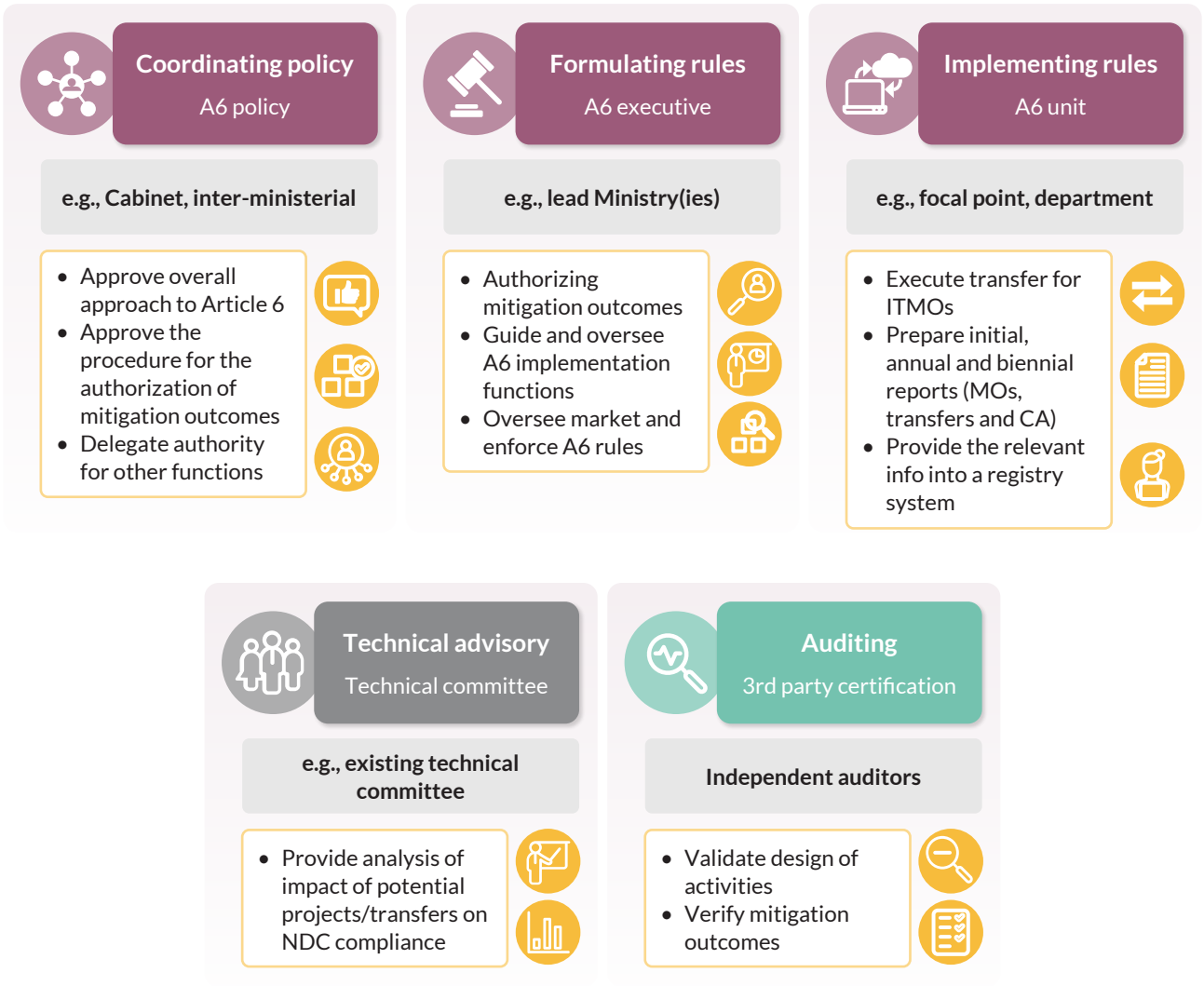
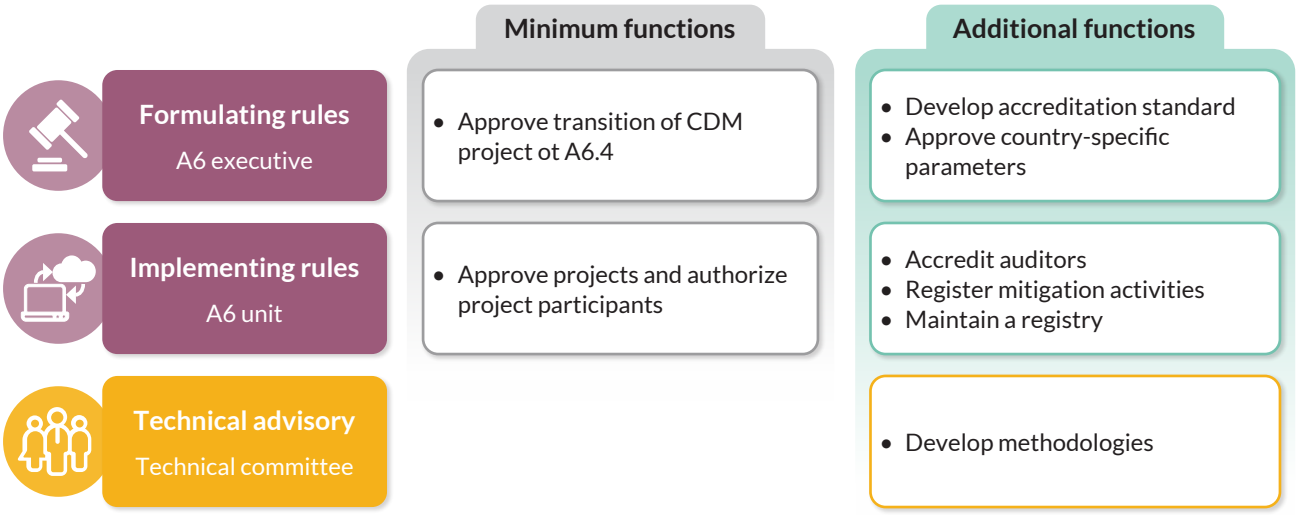


Figure 16. Additional functions for Article 6.2[7]

3.3 Functions required for Article 6.4

Article 6.4 establishes a centralized international crediting mechanism that will issue carbon credits designed to promote cooperation among countries in achieving their climate goals, being a successor to the clean development mechanism (CDM). Article 6.4 emission reductions (A6.4ERs) must still be authorized, as per the Article 6.2 guidance, before they can be used towards another country's NDC or for other international mitigation purposes. There are both minimum and additional functions to implement Article 6.4 (Figure 17).

Figure 17. Minimum and additional functions for Article 6.4[8]



Relying on elements of existing crediting mechanisms[1]

When a host party decides to recognize and use procedures or elements of existing crediting mechanisms, this should be established in the Article 6 strategy. This implies that the decision rests solely with the host party to determine if, as part of its strategy for Article 6 and ensuring compliance and consistency with the NDC, the units issued by these mechanisms could be authorized as ITMOs, and under what conditions or circumstances. These crediting mechanisms encompass not only independent crediting mechanisms (e.g., GS, VCS, and others), but also international crediting mechanisms (e.g., governed by the UNFCCC such as CDM and the Article 6.4 mechanism), bilateral crediting mechanisms (e.g., Japan's Joint Crediting Mechanism or the bilateral arrangements between Switzerland and other countries supporting Klik Foundation activities) or domestic crediting mechanisms designed to supply MOs to international markets.

International and independent crediting programs offer significant opportunities for implementing national Article 6 frameworks, especially when the host party doesn't have enough resources and technical capacity to develop a domestic crediting framework in the short term. This has the potential to expedite implementation, reduce expenses, and enhance credibility within international markets. Nonetheless, incorporating components from these programs may impose limitations on flexibility and constrain institutional options, so the host party must analyze country-specific implications of adopting certain elements or processes from existing international mechanisms.

Tasks that require technical expertise (such as the approval or development of methodologies, the development of accreditation standards for verifiers, the approval of country-specific parameters to estimate emission reductions and the accreditation of auditors) could be where the host party chooses to rely on existing crediting mechanisms to operationalize Article 6.2. The host party could also rely on existing crediting mechanisms for registering the mitigation activity, issuing emission reduction units, and maintaining a registry of MOs. Specific functions that cannot be delegated are the authorization and transfer of MOs, as they can only be carried

out by the host party. If a host party chooses to authorize and transfer MOs from a more customized, domestically developed crediting mechanism, it will be important to work with potential buyer countries and/or international agencies to ensure that the methodological standards, procedures and auditing systems will be accepted by potential buyers.

Creating domestic and bilateral approaches to crediting allows host countries greater control on MRV, and thus, greater visibility over their transfer and use. However, creating domestic mechanisms is time-consuming and cost-intensive, while the credits issued by national mechanisms could potentially be less fungible than those issued by international or independent mechanisms.[9]

As part of an assessment of existing capacities (chapter 4) the host party should analyze the advantages and disadvantages that adopting elements or functions of existing international schemes. This analysis should consider the criteria to authorize MOs, such as aspects of additionality, co-benefits, contribution to sustainable development goals (SDGs) or others that are relevant for the country purposes.

Box 8. Assessing existing capacity on elements that could be adopted from other international mechanisms

- Does the country have accredited verification bodies in the sectors of interest for mitigation activities in Article 6 or does it have domestic accreditation systems for verification bodies in place?
- Does the country have recently approved methodologies in the sectors of interest for mitigation activities in Article 6? If not, does it have the technical capabilities to develop or approve the required methodologies? Which standards have methodologies in the sectors of relevance for mitigation activities? Do these methodologies have standardization potential?
- Does the country have a technical committee in the field of mitigation policies with characteristics, capacities, and competencies to develop country-specific parameters for estimating reductions?
- If these standards that were not made for Article 6 are adopted, might long-term credibility be at risk (e.g., in the issuance of units)?
- Are the MRV costs of these schemes significant enough that they may hinder the implementation of mitigation activities?
- Could the complexity of the schemes hinder the implementation of mitigation activities? Is the unit issuance process robust enough to ensure environmental integrity?

When deciding to adopt elements, functions, or processes from existing crediting schemes, host countries should consider the implications from the perspective of expected mitigation activities. Chapter 4 of this guide will help with this.

Chapter 4

Map existing roles and capacity

Based on the functions required to implement Article 6, host countries should identify suitable institutions to perform Article 6.2 and Article 6.4 functions, and should assess their capacities in terms of staff, workload and skills. This will allow them to determine whether institutional capacities and the regulations in place, are adequate for having roles assigned to them.

Building on existing institutions in the country, where possible, can save both time and money for getting started with Article 6 engagement. Often, suitable institutions for the Article 6 functions explained earlier will already exist. Even if new institutions are necessary, they should fit within the existing regulatory framework as much as possible.

Mapping existing capacity and mandates includes the following:

- Identifying institutions currently responsible for climate policy coordination, development and implementation
- Checking whether the scope of the regulatory mandate for these institutions needs to be expanded to cover Article 6
- Assessing the additional capacity needs of these institutions to cover Article 6 functions

4.1 Identify potential existing institutions to carry out Article 6 functions

The host party should look at the existing bodies that are already carrying out functions similar to those identified in the previous section (e.g., coordinating policy, developing rules, implementing rules, etc.). A set of questions will help identify institutions that are relevant for Article 6 functions and roles, drawing from existing capacities and collective experience in carbon markets (Table 2). Existing capacities could be related to reporting obligations to the UNFCCC (i.e. ETF), national policies (i.e. existing MRV framework, CPIs), and CDM activities.

Table 2. Questions to identify existing institutions that are relevant for Article 6 governance

Functional area	Questions to identify relevant institutions	Potential Article 6 functions
Coordinating policy	Who approves the NDC? Who approves the national climate change strategy? Who approves the national communication?	The institution(s) that have these responsibilities may have the capacity and experience in high-level decision making and coordination related tasks at national and international level. These entities could approve the overall Article 6 approach and the procedure of authorization of MOs.
Developing rules	Who serves as the CDM board? Who creates or establishes national CPIs (e.g., emission trading system, carbon tax)?	The institution that exercises these roles is usually the highest authority within a government (i.e. a ministry) whose main function is the supervision of climate change policies, such as the CDM activities and carbon pricing instruments. These functions fit with the oversight and rulemaking roles needed for the implementation of Article 6, such as the authorization of MOs and the market oversight.
Implementing rules	Who is the administrator of the CDM designated national authority (DNA)? Who administers the national registry or MRV framework? Who performs the role of UNFCCC focal point? Who accredits verification bodies? Who supervises the activity of regulated entities under climate policies? Who checks that mitigation activities are in compliance with the law and human rights?	The institutions or specific areas that perform these functions of an administrative nature could simultaneously perform the technical tasks required in the implementation of Article 6 such as the review of documentation, the recording and management of information in the registry, the execution of transfers and the preparation of reports. For example, one of the tasks of the CDM DNA is to provide a letter of approval to project participants in CDM projects. The Article 6 administrator could also prepare the authorization letters under the supervision of the Article 6 executive body.
Providing technical advice	Who is on the CDM technical committee? Who is on the NDC technical committee(s)? Who is on the national communication and national inventory technical committee(s)?	If the country has technical committees that address issues such as the performance of CDM projects, the development and/or evaluation of the NDC, or any committee that has representation from various sectors inside and outside the government related to climate policies, it is worth evaluating whether it has the capacity to address the Article 6 themes. If this is not feasible, the country's experience in implementing committees can still be used to establish an Article 6 committee.

Through responding to those questions, host countries can create a shortlist of suitable institutions to perform Article 6 functions as a starting point for establishing institutional arrangements and assigning functions.

4.2 Check the regulatory mandate of possible institutions to carry out Article 6 functions

Host countries should review the regulations that establish the authority of the identified institutions in the previous section. This will confirm whether, and to what extent, those institutions are allowed to take on Article 6 responsibilities:

- Article 6 functions fit into current regulations (e.g., there is no conflict with Article 6 functions)
- Article 6 functions will fit with an amendment of the regulations
- Article 6 functions can only be covered by creating new regulations

While developing an Article 6 mandate allows the host party to establish specific functions, having a legal basis for what the institutions are allowed to do will provide certainty in the adoption of Article 6 functions.

To provide guidance in identifying whether an institution is allowed to adopt Article 6 functions, or if amendments to current institutional mandates are needed to streamline this process, the host party may respond to certain questions. Follow the process in Figure 19 and respond to the questions below.

Figure 18. How to determine whether a new regulatory mandate is needed and, if so, what type

Box 9. Identify regulations that govern institutions and review the institutional roles

- What are the regulations that establish roles and responsibilities around climate change policies, for a specific institution?
- For what purpose was this institution created?
- What are the functions of the institution?
- What are the departments which could adopt Article 6 functions?

Box 10. Checking the alignment of Article 6 functions with institutional authority

- What type of tasks does the institution perform?
- Are coordinating policies, developing and implementing rules functions within its scope?
- Are the functions required for Article 6 consistent with those established in the regulation, or do they conflict with them?
- Are the boundaries of its responsibilities clear (specific) or ambiguous (general, unclear, not specified)?
- Are there gaps in the regulations that may hinder the performance of Article 6 functions?

Box 11. Assessing the feasibility of regulatory amendments

- What kind of amendments would be required in the current regulations to align the required Article 6 functions?
- Will the identified amendments facilitate the implementation of Article 6?
- Are the processes to update the regulation challenging?
- Is it feasible to create a regulation for Article 6 that covers all the required institutional arrangements and functions?

As an output of this analysis, the host party identifies the gaps in the regulations that might hinder the implementation of Article 6 activities. If it is decided to amend regulations, the host party should develop a plan and consider existing regulatory processes that might include regulatory impact analysis and public consultations that will impact on the timeframe to implement Article 6 functions.

4.3 Assess capacity needs to integrate Article 6 functions into existing or new institutions

This section explains how to assess the capacity needs of the institutions identified above, aimed at preparing a capacity building plan in the light of Article 6 implementation.

Based on the outputs from sub-chapter 4.1, host countries must empower an institution with the authority to adopt the Article 6 strategy. The institution then will coordinate with other ministries (or institutions) and delegate authority to them about the functions to be covered towards Article 6. This will be established through a specific mandate (see chapter 6 in Guide 2).

To assign the functions to the institutions shortlisted in sub-chapter 4.1, the host party should assess institutional capacities. The assessment covers the scope of activities, the availability and skills of the staff, the workload, and the resources. Institutional capacity also includes the required infrastructure.

4.3.1 Institutional capacity

Host parties can use leading questions as a guide to assessing institutional capacity and identifying gaps in specific departments, thematic areas or units within the short-listed institutions (Box 12).

Box 12. Analyzing current institutional capacity

Questions to help identify gaps	Action required
How many employees are there in the specific area or office of the shortlisted institutions? Are there enough to perform current tasks? Are there enough to perform additional tasks?	Map number of employees and positions per potential areas/offices. Estimate the required employees for additional tasks related to Article 6. If they are not enough to perform current tasks, consider a staff increase and the related costs.
Are the tasks performed established in a mandate? Could the Article 6 functions be [legally] adopted by the institution (see sub-chapter 4.2)?	If not, consider amendments to regulations governing institutions as given in sub-chapter 4.2.
Are the responsibilities covered on time?	If not, make a root cause analysis to determine the reasons (e.g., lack of staff or lack of training or expertise). Consider a staff increase and training as necessary to adopt Article 6 functions.

(continued)

Box 12. Analyzing current institutional capacity (*continued*)

Questions to help identify gaps	Action required
Is staff turnover common in the office?	If yes, make a root cause analysis to determine why the staff is constantly moving. Consider the review of the recruitment process, work conditions and the staff training necessary to adopt Article 6 functions.
How is the staff workload considered (e.g., overload, enough, adequate)? Is the staff covering tasks outside of the established scope?	If staff are currently overloaded, consider a staff increase to cover functions within a manageable workload. Ensure good work conditions for the staff involved. Review the workplan in the institution, prioritize tasks and rely on other work teams if redistributing the workload is feasible.
Do the staff have the adequate background and skills to manage Article 6 functions?	If not, consider training staff and review recruitment processes to ensure that the technical background required to carry out the activities is covered.
Is the budget required to perform the tasks enough?	If not, look for sources of financing to increase resources to make Article 6 operational.
Is the equipment sufficient and does it cover the minimum technical requirements to perform the tasks?	If not, look for sources of financing to increase or improve resources to make Article 6 operational.
Is the inter-institutional coordination adequate (i.e. inter-ministerial, and among different units)?	If not, consider working on engagement and capacity building with the necessary entities and units. Make sure they understand the relevance of the coordination in the Article 6 strategy implementation.

As a result of this analysis, the needs should be determined regarding strengthening the following:

- The regulatory framework for the adoption of Article 6 functions (as established in sub-chapter 4.2)
- The recruitment of personnel and their permanence, with adequate working conditions (including adequate training for their activities)
- Management of workloads
- Inter-institutional coordination and coordination between areas involved.

The host party may determine its capacity needs based on the set of questions above, and should establish a plan to reduce the gaps and cover the needs.

4.3.2 Infrastructure-related needs

For tracking Article 6 activities, it is necessary to develop all the supporting tools and the Article 6 registry needed for keeping records and storing information about the procedures of authorizations and transfers. This mainly involves collecting data from activity participants as inputs for accounting and reporting of MOs.

A number of supporting tools may be developed to track the processes (Table 3). Assess the available infrastructure on which the supporting tools for Article 6 could be built. The draft requirements and designing of an Article 6 registry is more fully addressed in chapters 6 and 7.

Table 3. Supporting tools related to tracking Article 6 procedures

Procedure	Templates and tools
Authorization	Authorization criteria (public requirements) Internal procedure for authorizing ITMOs (operational manual) Authorizations database (”the national database”) Request for authorization template Completeness check Letter of authorization template Template for rejection of request
Transfer	Internal procedure for transferring ITMOs Transfer approval request template Completeness check Letter of transfer approval template Article 6 registry
Accounting	Spreadsheets to account for MOs and apply corresponding adjustments Article 6 registry
Reporting	Internal procedure for reporting annual information (including data gathering and quality assurance/quality control (QA/QC) activities) Internal procedure for reporting regular information (including data gathering, QA/QC and inter-institutional cooperation activities) Templates for gathering data Spreadsheets to make estimations (e.g., emissions balances)
Other	Operational rules for institutional arrangements Verification guidelines Verification report template Monitoring plan template Procedures for accrediting verification bodies

Existing capacities may include those related to the preparation of the national GHG inventory, national communications and BTR. The host party may rely on those existing capacities to develop the required infrastructure for Article 6 activities.

Chapter 5

Prepare draft institutional framework and capacity building plan

Host parties need to establish their institutional framework that is made up of the procedures for authorizing, transferring, accounting and reporting of ITMOs; the institutional arrangements with specific roles and responsibilities; as well as the related infrastructure to operationalize the Article 6. The institutional framework must be established through a legal framework, which will entail analysis and consultations with stakeholders, according to the country's own regulatory development laws. For these discussions, the host parties must first develop a draft institutional framework.

Likewise, capacity building covers both training activities for staff and also the development of the mandates, tools and infrastructure essential for the Article 6 strategy implementation. This is to ensure that the staff in the government and activity participants are both aware of their roles and have skills to execute them.

5.1 Determine the scope of the legal framework

The Article 6 legal framework will allow the host Party to establish a solid legal basis that provides certainty to the stakeholders about the operationalization and expected outcomes around cooperative approaches. The scope of this mandate will be key in establishing the rules, being able to offer flexibility for the development of mitigation activities, depending on the country's long-term plan.

The determination of the full scope of the mandate should be established based on the pertinent analyses that happen while the strategy is being developed (see Guide 2). In this sub-chapter, the focus is to establish the scope of the legal framework around institutional frameworks, as this is a key element for implementing the Article 6 strategy.

5.1.1 Determine institutional arrangements to implement Article 6 procedures

As discussed in sub-chapter 3.1, institutional arrangements are established at cabinet, ministerial and departmental levels and should cover key functions for Article 6, such as coordinating policies, developing and implementing rules, including the coordination of technical committees that provide technical advice, and the oversight of auditing activities.

The host Party will determine the institutional arrangements that are necessary to perform the Article 6 functions, based on the existing capacities as discussed in chapter 4. In other words, host party should determine which institution and areas will have responsibility in carrying out Article 6 responsibilities and specify the list of tasks in their side. Each position within the institutional arrangements must define its series of functions and responsibilities as established in the legal framework. The institutional arrangements must have operating rules to ensure its coordination and effectiveness.

Ghana provides an example of a host party establishing its institutional framework to address Article 6.2 transactions (Box 13). For more details, consult the published framework on international carbon markets and non-market approaches of Ghana.

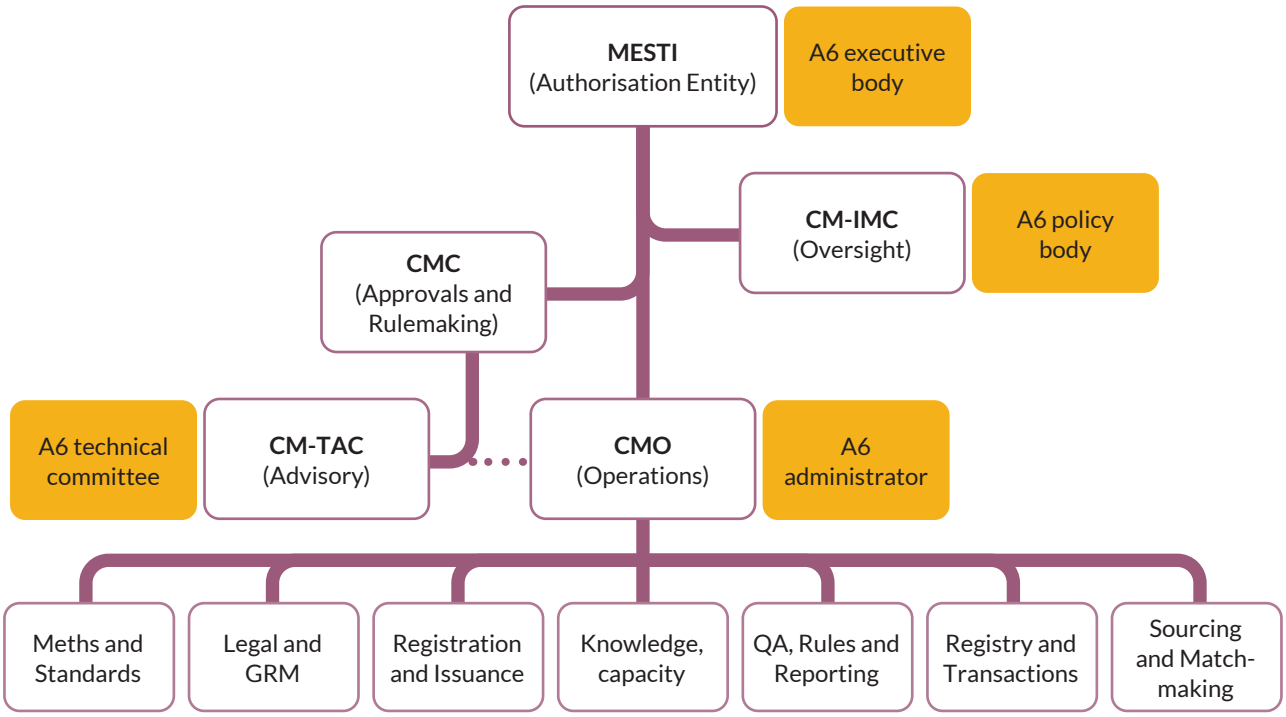
Box 13. Institutional arrangements for Article 6.2 in Ghana

Ghana published its framework on international carbon markets and non-market approaches in December 2022,[10] which presents the objectives of the policy framework and the institutional arrangement set up by Ghana. The framework includes the governance agreements for decision making, mitigation activity approval procedures and institutional arrangements for Article 6.2 transactions.

MESTI formulates the climate policies and supervises the implementation of the multilateral environmental agreements and is responsible for overseeing the implementation of the Article 6.2 cooperative approach. This ministry is responsible for authorizing the MOs and is establishing the following national structures to perform Article 6.2 cooperative approach transactions:

- CM-IMC: high-level strategic decisions on Article 6.2 engagement
- CMC: development and approval of the rules for transactions
- CM-TAC: provision of technical advisory on authorization, approved methodologies, validation, validating entities and issuances of MOs
- CMO: implementation and operation of Article 6.2 activities

Box 13. Institutional arrangements for Article 6.2 in Ghana (*continued*)



MESTI: Ministry of Environment, Science, Technology, and Innovation
CMC: Carbon market Committee
CM-IMC: Carbon Market Inter-Ministerial Committee
CM-TAC: Carbon market Technical Advisory Committee
CMO: Carbon Market Office

As Ghana did, host countries should work on the draft institutional framework for Article 6 showing in an organizational chart, the levels in which the arrangements are established and the role they play in the overall framework. Added to this, the specific tasks for each body or unit must be established in the draft framework.

5.1.2 Determine roles

While Article 6 procedures and "who" could perform each activity were addressed in chapter 2, the essential functions that must be covered to implement each of the procedures were shown in Chapter 3. Based on that, aspects related to the assignment of functions to be established in the legal framework are highlighted below. Box 14 shows the institutional options to cover the functions for each Article 6 procedure.

Box 14. Institutional options to implement Article 6

	Article 6 policy body	Article 6 executive body	Article 6 administrator	Technical Committee
	Inter-ministerial (i.e Cabinet)	Ministerial (i.e. Environmental authority)	Office/Unit (i.e. Subdivision of the environmental authority)	Govt. and non-govt. members
Authorization	The authorization process involves both administrative and technical activities. Based on authorization requirements, the evaluation of a request is performed by a technical committee, or by a body at inter-ministerial level. If the requirements are not complex enough to require this level of review, it is likely that the country will decide to work through the Article 6 administrator. Requests for authorization checks might be stricter at the beginning, as the process settles and becomes systematic, after training and practice by the personnel who will be involved in issuing authorizations. Evaluation of request Authorization issuance Article 6 database management			
Transfer and tracking	There are two key tasks that the host party executes in this process: the approval of the transfer, and the registration of the information in the Article 6 registry. The first is related to the requirements established by the host party through the authorization letter, which may be administrative requirements in addition to those requested in the authorization (e.g., it could be a more administrative procedure if the authorizations are made *ex post*). The second is an administrative task that requires the ability to manage the Article 6 registry. Therefore, the approval of the transfer may be executed at the administrative level if it does not require exhaustive additional checks. Likewise, the recording of information can be assigned to an administrator. Checks and recording of information			

(continued)

Box 15. Institutional options to implement Article 6 (*continued*)

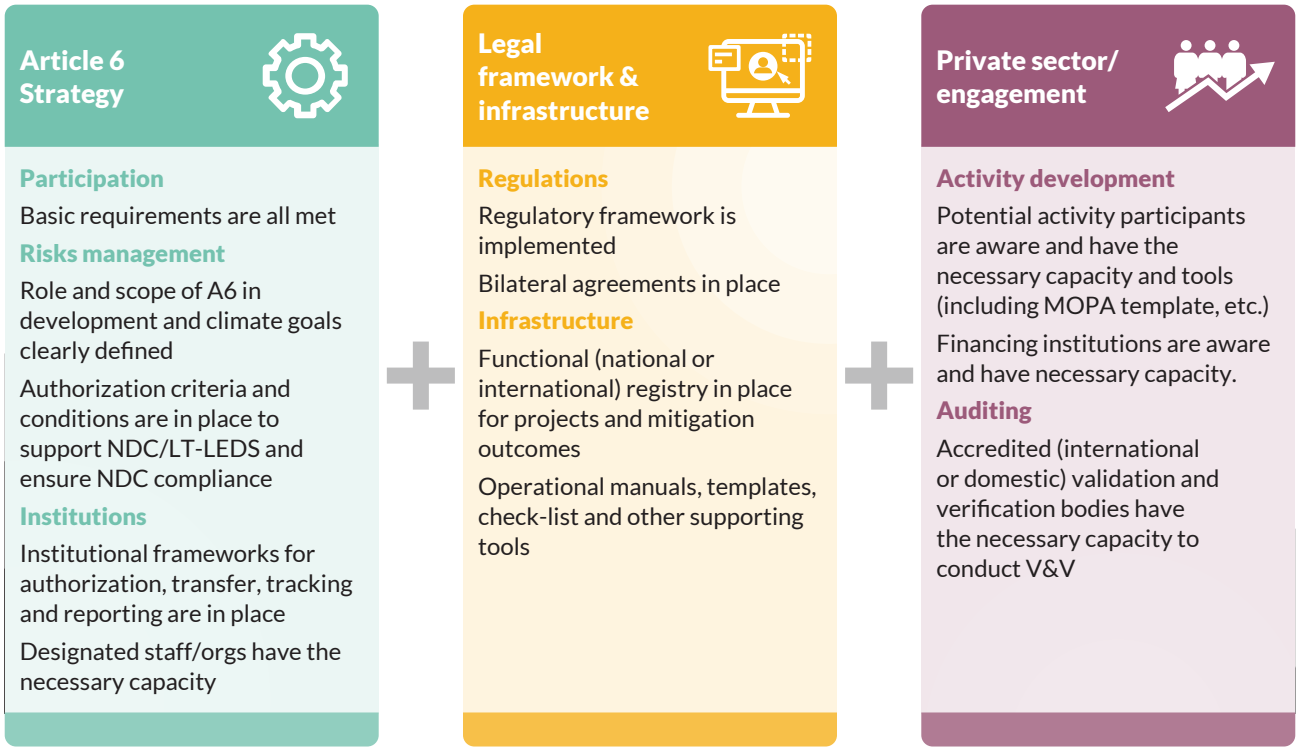
Accounting and reporting activities entail a variety of responsibilities, like compiling information, reviewing data and preparing analyses, and applying corresponding adjustments. It also involves the approval and submission of the reports to the Article 6 database. Those handling these responsibilities may range from administrative staff to other instances of the lead ministry and other agencies, including the focal point to the UNFCCC. The choice of which body considers amendments to the authorization criteria/process will depend on the strategic Article 6 engagement decisions that were approved. Because of its relationship to NDC reports, the UNFCCC focal point can also play an important role. Depending on which institution the host party chooses for the Article 6 executive body or Article 6 administrator, this may or may not be the same as the UNFCCC focal point.

5.2 Prepare a capacity building plan

Capacity building cuts across all stages of an Article 6 policy framework, from preparation, implementation and continuous process improvement. In this context, two fundamental elements can be mentioned in the development of capacities: training staff in the functions required in all stages and preparing the necessary infrastructure to operationalize Article 6 (e.g., Article 6 registry, operation manuals, templates and other necessary tools).

This capacity development plan, in addition to covering these aspects, is addressed to both government actors (i.e., Article 6 policy body, Article 6 executive body and Article 6 administrator), as well as activity participants and auditors within the scope of their responsibilities (Figure 19).

Figure 19. Scope of a capacity building plan



5.2.1 Article 6 strategy readiness

To build capacity the country must identify, as a starting point, the existing Article 6 capacity building programs, the Article 6 pilot activities, and the emerging best practices in the host countries. Likewise, identify gaps in compliance with the basic requirements for participation in Article 6.

In terms of risks and opportunities, it is necessary to evaluate how the Article 6 approaches can contribute to the NDC /LT-LEDS objectives and recommend strategies to promote such opportunities. In addition, evaluate the risks of overselling by sector and type of activity and evaluate various strategies to minimize said risks. For more details, see Guide 2.

In terms of institutions, analyze the existing institutional frameworks and assess the needs to be covered under Article 6 cooperative approaches; assign roles and responsibilities for authorization, transfer, tracking, accounting and reporting procedures, and train staff accordingly. This guide assists the host party in defining institutions and utilizing existing capacities, as discussed in chapters 3 and 4.

5.2.2 Prepare regulations and infrastructure

The development of an Article 6 legal framework must adhere to the norms and/or regulatory processes that govern the preparation of these instruments in the country, including the development of regulatory impact assessment and public consultations, among others. Likewise, the host party should first consider analyzing the existing regulatory framework and determining if it is necessary to amend it to make it consistent with the legal framework

of Article 6, as described in chapter 4. This stage also includes the development of bilateral agreement frameworks if necessary, according to the established strategy.

For the development of an adequate and functional infrastructure to the conditions and the Article 6 strategy, the host party must assess registry options, needs and capacity, including relationship to proposed CPIs and/or other domestic crediting mechanisms, when applicable, and make a proper registry design, defining functional and technical specifications. See chapters 6 and 7 on draft requirements and designing an Article 6 registry.

5.2.3 Private sector engagement

Activity participants should prepare for the development of mitigation activities under the cooperative approaches of Article 6 to generate MOs in the host party under the terms and conditions of the authorization. For this, they should not only acquire knowledge about the relevance of the adequate implementation of MRV, but also the understanding of each process that involves them in obtaining MOs. In addition, they must be able to handle the tools (i.e. templates, manuals, etc.) and their responsibility in the Article 6 registry, from opening an account, the information to provide, the interpretation of the information that the registry generates, and the execution of transfers, among others. To do this, they could undergo training provided by the host party.

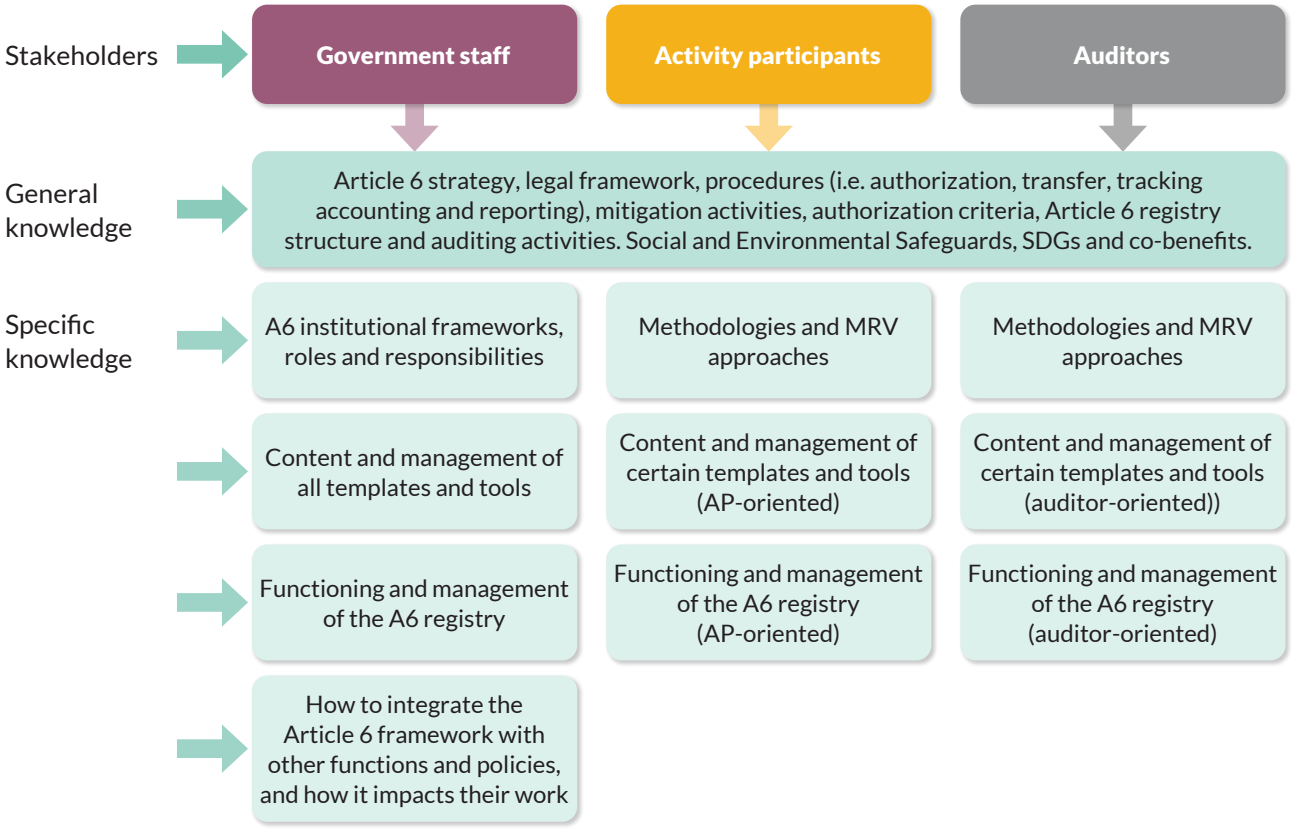
On the other hand, accredited independent auditors (i.e. domestic verification bodies) or the ones recognized by the host party (i.e. internationally accredited) for tasks of validation and verification of mitigation activities, must be trained in the methodologies under which the mitigation activities are carried out as established by the host party, and meet the requirements to maintain its accreditation. Likewise, they must familiarize themselves with the Article 6 registry, and the templates and tools that they must use under the cooperative approaches in which they are participating.

The host party must ensure that both the activity participants and the auditors have the required knowledge and skills to comply with their responsibilities. For this, the host party should provide specialized training courses as well as the manuals, leaflets, online platforms or other types of tools that allow them to access the knowledge and pertinent updates that may be frequently transmitted to these interested parties.

5.2.4 Train stakeholders in Article 6 functions

Training is provided at different levels, according to the host party's level of readiness, on how to implement the Article 6 procedures. The training should be provided to the staff in the government entities involved in the Article 6 framework (mainly the Article 6 executive body and Article 6 administrator) as well as to the activity participants and auditors. For each type of audience, a goal-oriented training plan should be prepared. It is expected to have frequent updates on the Article 6 cooperative approaches as well as new government staff involved and new activity participants that require training. The plan should be able to meet these needs (e.g., annual plan).

Figure 20. Scope of a training for relevant stakeholders



5.3 Evaluation and improvement

Host countries should carry out periodic reviews of the performance of the Article 6 functions to evaluate the efficiency in their implementation. This evaluation helps to identify whether specific tasks or activities should be improved. Periodic review of functions could be part of an overall process to evaluate the whole Article 6 framework to identify where processes can be streamlined once specific challenges related to initial implementation are overcome.

To carry out this review, the designated authorities (i.e. Article 6 policy body) should compile specific information from the areas involved in the development of the activities as well as the impact of the implementation of Article 6 activities (authorized and transferred MOs) in NDC progress.

Each country should determine the frequency of this review, based on its available resources, the conditions, and related implementation times. However, it is advisable to do a revision at least every two years so that the review process is aligned with the regular reporting process to the UNFCCC (i.e. BTR). Another alternative is to perform this evaluation in line with the NDC revision cycle.

Host countries may establish an evaluation process that specifies the responsibilities of each area involved (Figure 21)

Figure 21. Evaluation and improvement

Aspects that may be relevant for the evaluation and improvement purposes are:

- Capacity building needs related to implementation
- Operation and effectiveness of the Article 6 registry
- Quality of information related to MOs
- Efficiency in information exchange processes (e.g., inter-institutional coordination)
- Effectiveness of the formats used to track activities (e.g., records of mitigation activities, requests for approval, verification reports or others).
- Identification of bottlenecks in procedures
- Capacity needs in verification bodies
- Effectiveness of the verification processes

Chapter 6

Prepare draft registry requirements

Registries are the main infrastructure that host parties and acquiring parties must have to transfer ITMOs. These registries must enable host parties to avoid double-counting ITMOs, make data accessible and transparent, and track ITMOs. This infrastructure must ensure that Article 6 is properly implemented and that requirements set by it are met. In other words, registries are systems to record the Article 6 procedures, which can be done in a national registry, multiple carbon crediting registries, or the international registry for Article 6 provided by the UNFCCC.[vi]

Article 6 activities demand the use of electronic infrastructure capable of maintaining and supporting the information generated from the authorizations of MOs to the execution of transfers. The infrastructure facilitates the accounting and reporting of MOs transferred internationally between the parties. Therefore, host countries must determine the electronic infrastructure necessary to comply with Article 6 activities, which can be complex if, instead of designing a new system, it is built from existing MRV systems that respond to national policies (i.e. mitigation registries, carbon pricing instruments) and other international requirements (i.e. enhanced transparency framework). In other words, host parties may decide to develop one single Article 6 registry, use other existing registries (incl. carbon crediting mechanisms), or use the registry provided by UNFCCC.[vii]

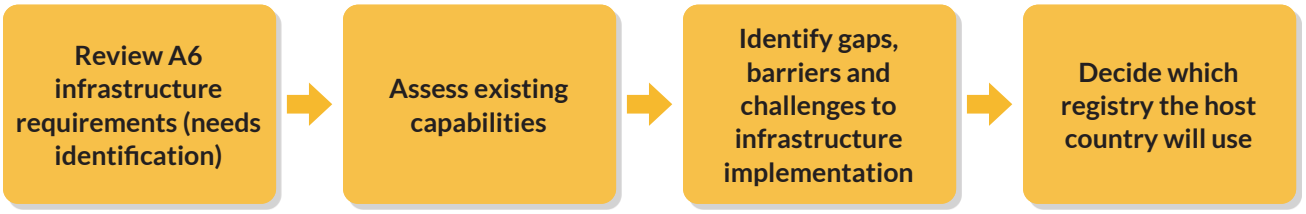
Article 6 establishes minimum characteristics and functions that the registry must have to execute the processes involved and carry out the necessary record-keeping. However, some countries may have operational MRV registries, electronic or web-based systems linked to domestic mitigation policies and ETF obligations; Article 6 infrastructure could potentially be linked to these to facilitate MOs accounting and the preparation of the emissions balance.

For Article 6 activities, host countries will need to decide which registry to use (Figure 22): that of an existing independent crediting mechanism, the new registry to be provided by the UNFCCC, or their own national registry.[11]

vi According to the paragraph 30 of the Decision 2/CMA.3 "The secretariat shall implement an international registry for participating Parties that do not have or do not have access to a registry […]. Any Party may request an account in the international registry." Negotiations are ongoing to specific the nature and scope of such as international registry.

vii Based on paragraphs 29 and 30 of the Decision 2/CMA.3

Figure 22. Defining the appropriate registry for implementing Article 6



6.1 Review Article 6 infrastructure requirements (identify needs)

At a minimum, the Article 6 registry must be able to store, track and report on all the required information on authorization and transfer of ITMOs that will be included in the Article 6 annual information and BTR.[12]

There is no mandate for the use of a highly sophisticated system, but the greater security controls and functionality it contains the greater the protection of the information, and the better the support for final emission balances. The registry should consider the necessary specifications and functions in terms of required inputs and outputs, as well as storage and security features to monitor all information that is relevant for accounting and reporting purposes and that responds to the country's particular needs.

Article 6 does not further specify how the registry should be constituted, and focuses on what it must achieve (store, track, and report on all the required information on authorization and transfer of ITMOs). The Article 6 registry can be simple or complex, as long as it meets the objectives.

To implement a registry, host countries must consider: i) the information technology (IT) characteristics that the registry must meet to cover storage, monitoring, operability and security needs; ii) the technically feasible modules or components that it must contain (i.e. periodic modules such as GHG inventory, project-based modules, and/or for transactions modules); iii) technical capabilities for its maintenance and operation; iv) aspects related to the regulatory framework that facilitate and guarantee its operation and maintenance in optimal conditions.

There are basic aspects such as inputs and outputs that the Article 6 registry should contain to achieve optimal monitoring of the parameters that will allow accounting and reporting ITMOs to the UNFCCC (Table 4). These are not explicit requirements of Article 6, but items that will drive the achievement of objectives.

Table 4. Examples of inputs and outputs of a transaction registry in processes

Related process	Inputs	Outputs	Registry requirements/ functioning
Authorization	Activity participant information Date of request Date of authorization Request ID Mitigation activity Location Authorized MOs	Serial number for authorized MOs	An authorization-specific ID could help to track all information on that mitigation activity and activity participant, as well as the authorized MOs.
Transfer	Activity participant information Date of request Date of approval transfer Request ID Mitigation activity Location Verification body accreditation number Date of verification Lead verifier Materiality Transferred MOs	Serial number for transferred MOs	Using a transfer-specific ID to track all transfer-related information (activity participant information, mitigation activity information, amount of MOs transferred, acquiring party).
Accounting	Serial number for transferred MOs. GHG emissions inventory. NDC goals and progress.	Amount of transferred MOs Emissions balance	The system could be programmed to apply corresponding adjustments and reflect them in the emissions balance. It could require links to other systems (i.e. GHG inventory). However, applying corresponding adjustments is not mandatory for the Article 6 registry.

(continued)

Related process	Inputs	Outputs	Registry requirements/ functioning
Reporting	Information from the activity participants Information from the acquiring parties Information from the mitigation activity Authorized ITMOs Transferred ITMOs (amount and serial numbers) May require emissions from the GHG inventory May require progress towards NDC May require contributions to the SDGs and sustainable development	Amount of transferred ITMOs per activity type Emissions balance	The system can be programmed to generate reports with tables and graphs showing the emissions balance and the impact of transfers of MOs on compliance with NDCs. However, doing specific reports is not mandatory for the Article 6 registry.

The host party should ensure that the Article 6 registry is able to monitor accurate information from authorization and transfer procedures resulting in the emissions balance after applying corresponding adjustments for the transferred MOs. However, an essential function of the Article 6 registry is to record and track the information related to authorization and transfers, which would produce the necessary data to account for ITMOs and thus prepare the annual and regular reports. Applying corresponding adjustments, making emissions balances, and producing reports could be functions included in the Article 6 registry, but they are not mandatory – this is decided by the host party, based on its existing capabilities, resources and needs.

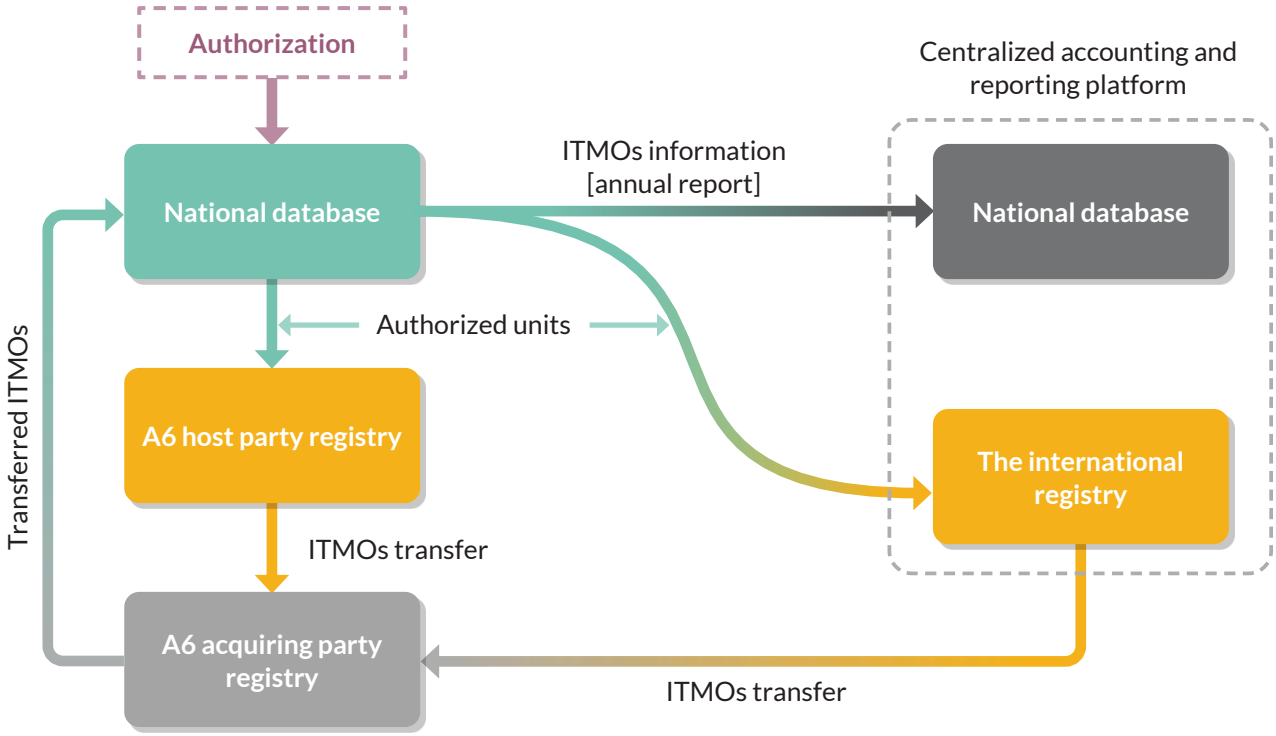
The operation of the registry must be carried out based on the institutional arrangements previously assigned (probably by the administrator of Article 6). More detail on the functions can be found in chapter 4.

Box 15. National databases, Article 6 database and Article 6 registry

The Article 6 database is part of the centralized accounting and reporting platform implemented by the secretariat for publishing information submitted by participating parties through the annual and regular reports. The purpose of the Article 6 database is to keep records of corresponding adjustments and emissions balances and information on ITMOs first transferred, transferred, acquired, held, cancelled, cancelled for overall mitigation in global emissions, if any, and/or used by participating parties.

Every party must have (or have access to) a registry to record and track through unique identifiers the following: authorization, first transfer, transfer, acquisition, use towards NDCs, authorization for use towards other international mitigation purposes, and voluntary cancellation (including for overall mitigation in global emissions, if applicable). The registry could be provided by the secretariat ("the international registry") or be developed by the party.

A national database is where the host party records the information generated, from the authorization request up to the issuance of MOs. This information (Table 4) may have unique serial numbers to track MOs that are the units to be transferred through the Article 6 registry (host to acquiring party), which implies that the information from the national database may be a registry entry.



6.2 Assess existing capacities

The host party should analyze whether existing capacities in terms of MRV systems are sufficient or if there is a need to develop registries that have greater coverage and integrate Article 6 processes. Some countries may have in place systems that respond to domestic policies, such as carbon markets, CPIs, or systems that serve for the preparation of the GHG emissions inventory, reporting sector-specific emissions or offsetting. Another possibility is that there are registries that serve simply as repositories of information where mitigation projects or interventions are recorded (in some cases monitored) for statistical, emissions-reporting, or even financial purposes.

Based on prevailing conditions, the host party should determine how to match needs to meet Article 6 requirements and continue to operate its current systems efficiently and, if practical, link systems to optimize their operation (Table 5). However, host countries have the option of using the registry provided by the UNFCCC.

Table 5. Identifying existing registries and systems and their functionality

Identify those instruments that are in place and the characteristics that they have.			
Instrument	**Y**	**Characteristics**	**Y**
Mandatory GHG emission registry		Sector-specific registry for reporting purposes	
		Other purposes	
		Does it have trackable electronic/web-based MRV?	
Mandatory registry of sector-specific mitigation projects (i.e. mitigation registries, offsetting registries)		For statistical purposes	
		For carbon credit transactions	
		To track NDC goals	
		To track national sectoral goals	
		To track corporate goals	
		To track CORSIA	
		Other purposes	
		Have specific problems been detected with methodologies in registration processes and/or reductions estimates?	
		Does it have trackable electronic/web-based MRV?	
Any voluntary emissions reporting programs (e.g., incentives to corporations)?		Does it have links to international crediting mechanisms (VCMs)?	
		Does it involve carbon credit transactions?	
		Does it have trackable electronic/web- based MRV?	

(continued)

Identify those instruments that are in place and the characteristics that they have.			
Instrument	**Y**	**Characteristics**	**Y**
Is the preparation of the emissions inventory-based on an electronic or web-based MRV system?		Is it functional?	
		Does it contain limited access to various stakeholders?	
		Is the provision of information efficient and timely?	
		Is the coordination between institutions adequate? (Is data provision efficient?)	
		Is the system capable of making sectoral emission estimates? (i.e. automatic estimates)	
		Are Q/C processes enabled?	
		Is the entire inventory preparation process monitored, or is it focused only on estimating emissions recorded by sector or subsector?	
		Does the system contain links to other information systems (e.g., energy or forestry information systems)?	
		Does it have trackable electronic/web-based MRV?	
Is there any mechanism that involves the registration and tracking of transactions?		CPIs	
		Schemes with domestic transactions	
		Schemes with international transactions	
		Has the tracking of these transactions been functional?	
		Does it have trackable electronic/web-based MRV?	

For those existing registries with an electronic system, platform or tool, the assessment should include the following items to determine whether extending the scope of those for Article 6 would be feasible and effective:

- Complexity of the management
- Relevant functionalities
- User types and complexity to coordinate and oversee them
- Accessibility
- Transparency (e.g., publication of reports)
- Legal framework (i.e. regulations to support the operation and maintenance of the registries or systems)
- Links with other domestic or international systems and its functionality
- Barriers to overcome (e.g., technological, maintenance and or operation costs)

If using or adapting an existing registry faces too many barriers, then the host party might decide to develop a new registry with standardized characteristics and efficient processes. The host party should consider the trade offs between managing a single registry that operates all schemes, programs, and policies related to mitigation versus having an independent registry for Article 6. Both alternatives can be functional if they have the necessary characteristics to achieve the objectives. The decision depends on the prevailing conditions (i.e. capacities) and the resources available.

If the host party does not already have a registry to track existing mitigation policies (i.e., it uses spreadsheets or other desktop computer tools for keeping records) an Article 6 registry should be developed from the outset. The advantage in this scenario is that it can be designed according to needs.

In the design and development of the Article 6 registry, the establishment of policies such as CPIs should be taken into account when they are planned for the coming years, so that the registry can house the necessary functions for the monitoring of all policies and thus optimize resources when feasible.

6.3 Identify gaps, barriers, and challenges to infrastructure deployment

Before the host party decides which registry to use, work should be done to identify the gaps, barriers and challenges to overcome towards its implementation, so that the design (or adaptation) of the registry (if applicable) can prevent any deficiencies in advance.

Chapter 7 provides further guidance on the elements in designing a functional registry for Article 6 when the host party chooses to develop a domestic one. However, the host party can identify the challenges that may arise when developing and implementing the registry (Table 6).

Table 6. Key considerations and challenges in selecting the Article 6 registry

Decision on the use of the registry	Key considerations	Potential challenges
Develop a new single registry for Article 6	The registry should at least be capable of hosting information on the authorized and transferred MOs. If a wider scope is considered, there might be other technical considerations to solve.	Uncertainty about the storage capacities that will be required in the long term. Linkage with other domestic registries for emissions-balancing purposes. Linkage with other international registries to avoid double-counting (i.e. VCMs). Make emission balances considering the information that is produced from other registries or systems.

(continued)

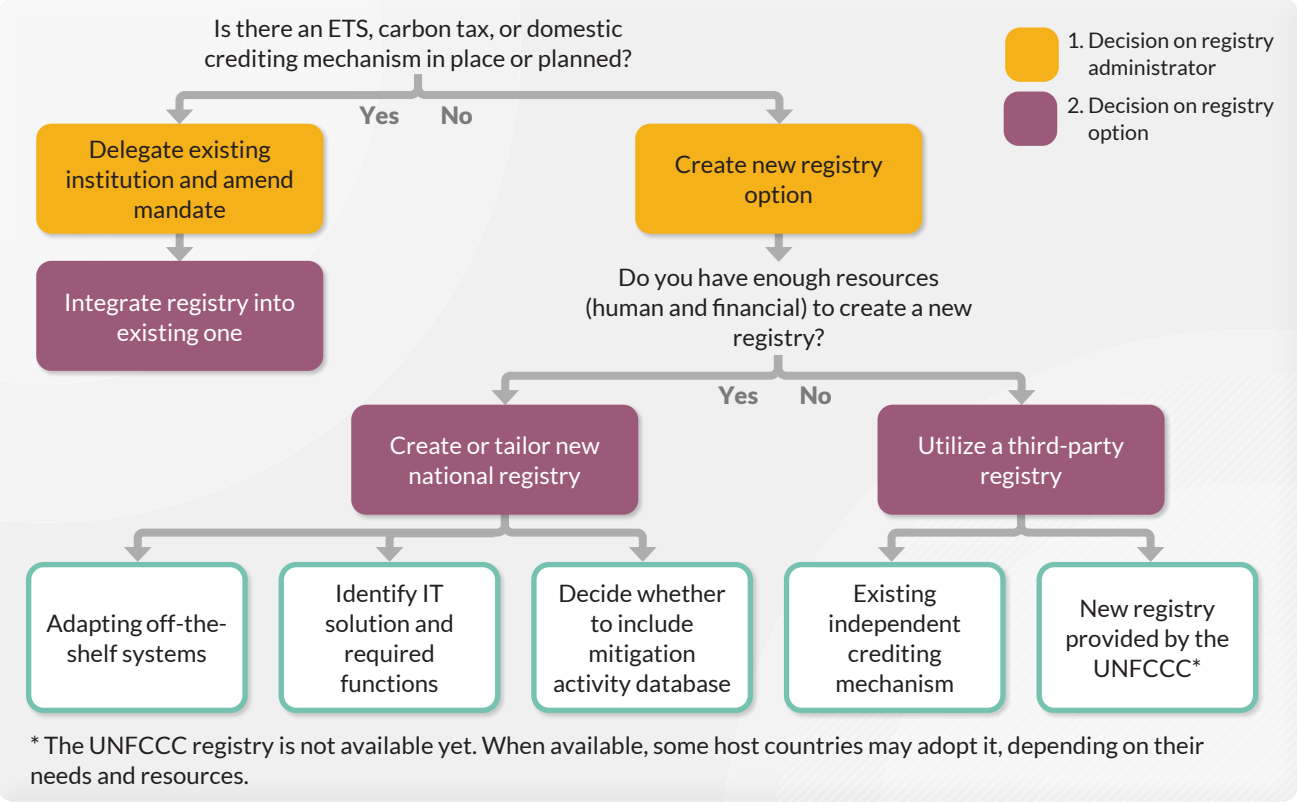
Decision on the use of the registry	Key considerations	Potential challenges
Extend the coverage of an existing registry	Consider the number of modules and users that the new Article 6 registry will require. Assess needs to determine specifications to cover in the registry.	Avoid double-counting of reductions. Links between different modules will increase complexity on its design and functionality. Links with other external systems (e.g., statistical, environmental, energy, forestry information systems, etc.) might be complex. Staff training may require significant efforts.
Using the UNFCCC registry[vi]	Make sure that the required inputs will be available to use the registry.	Current uncertainty about how the registry will work. Depending on its complexity, it may require more time and resources to train staff and prepare tools for collecting inputs. Accounting and reporting may require more efforts (i.e. the country must adapt to be able to use this registry).

Whichever choice is made, the host party must be clear about the needs to be met in terms of storage capacity and security controls to keep the information available and safe.

6.4 Decide which registry to use

Having identified the gaps between the needs to be covered by Article 6, the prevailing capacities, and the potential challenges, the host party must decide whether to develop a domestic registry for the sole purpose of meeting Article 6 needs, or to supplement existing registries, or to build on the UNFCCC registry, which could be more generic and potentially complex to manage (Figure 23).

Figure 23. Selection of the Article 6 registry



* The UNFCCC registry is not available yet. When available, some host countries may adopt it, depending on their needs and resources.

The different options in terms of the advantages and challenges in choosing the registry for Article 6 have various implications (Table 7).

Table 7. Implications for choosing an Article 6 registry

Choice	Condition	Advantages	Challenges
Develop a unique registry for Article 6	There are no other registries or electronic systems related to mitigation policies, or those that do exist have sufficient risks or obstacles to effectiveness in Article 6.	The registry can be tailored to needs.	In the long term, it may require adjustments when implementing other policies or expanding the coverage of existing policies. It may require additional adjustments or tasks when performing emissions balances.

(continued)

Choice	Condition	Advantages	Challenges
Adapt existing registries to accommodate Article 6 functionality	There are operational registries functional enough to allow the data exchange without the need to implement new procedures.	Existing infrastructure can be leveraged to facilitate the exchange of information and thus the balance of emissions. In the long term it can be effective.	The process of adapting and increasing functions with the required safety conditions can be complex, expensive and time-consuming, since multiple needs may need to be met.
Use the UNFCCC registry[vi]	There is no budget for the development of a specific Article 6 registry, or there are no other registries in the country that demand a link with the Article 6 registry, or it is intended to have a system totally independent of other policies for easier management.	There is no need to channel resources or make efforts to develop the registry.	Since it will be a generic registry, it is likely that there will be incompatibility with the specific needs of the country and that it will be difficult to link it to other systems. It may require additional efforts, especially if it is intended to track other mitigation policies. It will possibly require greater training efforts.

Box 16. Development of a registry system in Thailand

The Thailand Greenhouse Gas Management Organization (TGO) has the mandate to promote reduction of GHG emissions through developing and implementing GHG reduction projects. TGO works closely with the government, leading to efficient feedback on regulatory recommendations for carbon markets. TGO developed a national Thailand voluntary emission reduction (T-VER) program in 2014 with a registry based on CDM experience (https://registry.tgo.or.th/en/). Originally the calculations and data sheets were kept as Excel tables with transfers being done manually.

In 2022 TGO launched Premium T-VER as an option for high quality credits that should adhere to future core carbon principles (CCPs) from the Integrity Council on Voluntary Carbon Markets Article 6 guidance, and support the SDGs. The Premium T-VER system would also allow for international trading. The document "Rules for registration of purchases, sales, and transfers of carbon credits" underpins transfers of T-VER credits. A digital web-based registry platform overseen by a registrar is currently in the final stage of development, allowing the opening of accounts for project proponents (formal designation of the registrars in Jan 2023 – Order of TGO No. 1/2566 re: designation of registrars for carbon credit registry system). The registry will record certified carbon credits, assign unique identifiers for each credit unit, allow transfer of credits from one account to another, and track credit status.

By the end of 2023, an update to the registry platform will be established to meet the requirements of Article 6 of the Paris Agreement, allowing it to register, issue, track and transfer ITMOs resulting from Article 6 transactions and thus also allowing an exchange of data with other internal and external systems via an application program interface. To allow easier access, a user manual was created, describing the registry system and giving a step-by-step approach for participation.

As of August 2023, the official registry site records 360 projects registered, 150 projects certified, 210 projects pending, and 36 projects ended, with over 16 $mtCO_2eq$ of carbon credit issued and around 1.5 million carbon credits retired.

Chapter 7

Design and implement an Article 6 registry

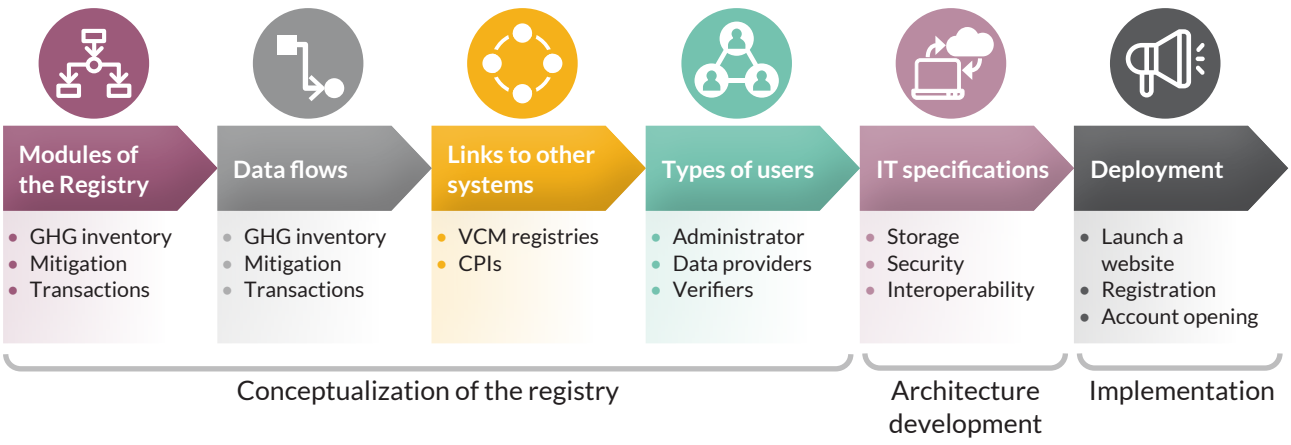
The host party could decide to implement a domestic Article 6 registry. This implies the design of this registry would be based on existing capacities and needs.

An Article 6 registry can be simple (i.e. just for transactions between parties). Or it could be complex, especially if it is linked to or incorporated into other existing systems such as national MRV, or registries used for CPIs or carbon markets. The registry could be expected to collect, manipulate, analyze, process and disseminate data, including visualization and reporting.

The host party needs to be aware of certain considerations for the design of the registry aimed at tracking ITMOs, in terms of its conceptualization (depending on the needs), development of architecture and its implementation.

The host party should decide on designing the structure and configuration of the registry (i.e. conceptualization) from the modules to include: responding to different objectives; the data flows required between different users (based on institutional arrangements) and modules (i.e. reports to be generated); as well as the links to other systems (Figure 24). Determining IT specifications obeys the conceptualization of the registry and requires IT expertise to lead in the design of an adequate architecture. Finally, a series of tasks are required to launch a registry, such as developing a website and disseminating information to start using the registry, as the account-opening procedure for activity participants.

Figure 24. Key aspects to designing and implementing a domestic registry



7.1 Conceptualization stage

7.1.1 Determine the modules of the registry

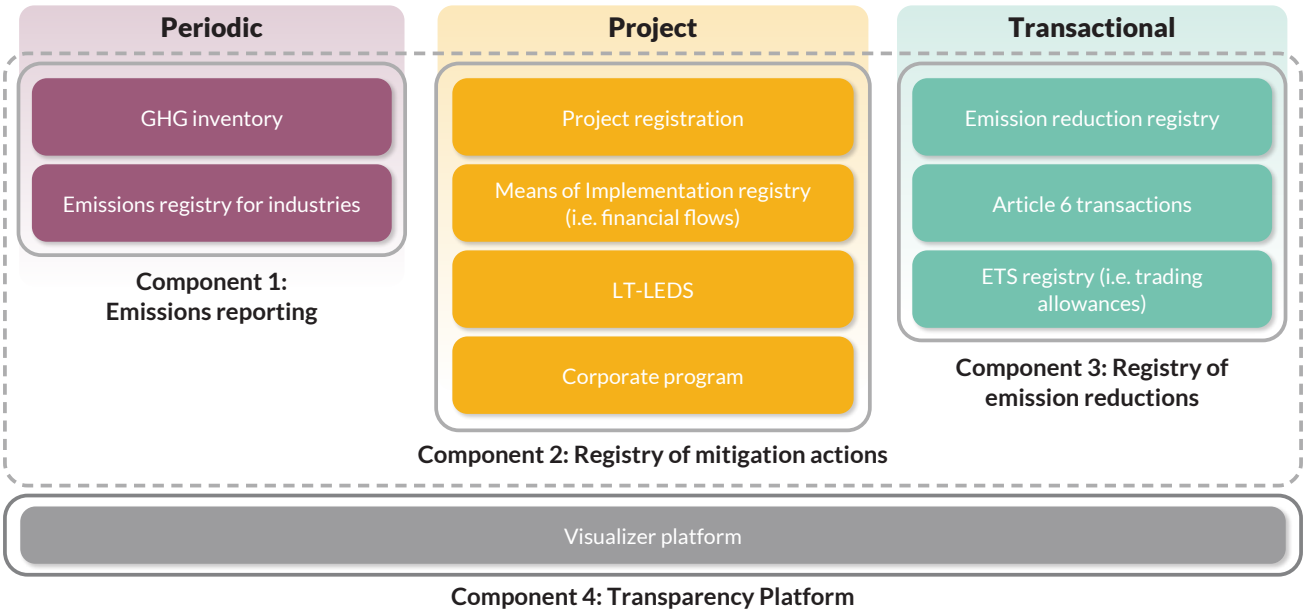
The host party should decide what modules or components the registry must contain (how many, what they are, and the objectives of each) (Table 8), particularly if it is going to be linked to other registries, as identified in previous steps.

Table 8. Examples of modules for an overall registry

	Module type	Objective
Article 6	Transaction-based	Transfer and account for ITMOs
NDC tracking	Tracking	Track progress of NDC
GHG inventory	Accounting, periodic	Compile activity data and make estimates and account for national emissions by type and sector
Registration of mitigation projects	Repository (storage) (Project-based)	Compile information of projects for statistical purposes
Offsetting program	Transaction-based	Execute and account for transactions in carbon markets
Domestic carbon market	Transaction-based	Execute transactions to contribute to corporate goals
ETS	Transaction-based	Trading allowances

Each type of module requires different functionalities and responds to specific IT characteristics, as they can be aimed at periodic reporting, project-based or for transactions, (Figure 25).

Figure 25. Example of configuration of an overall registry with a wide scope



7.1.2 Determine information flows

The host party should map the information flows that will be generated when the Article 6 registry is implemented, particularly if it is going to be linked to other systems or registries. This will help to determine the IT characteristics needed to manage and safeguard the information that will be exchanged and generated in the registry. To do this, the host party should assess inputs and outputs required by the module and consider the existing institutional arrangements to analyze how the data is reported and shared between entities or departments, and how it would impact the registry management, considering what would be required for the Article 6 registry.

7.1.3 Determine links to domestic and external systems

The host Party may consider linking the Article 6 registry with other existing or planned registries, provided that linking them is useful and does not hinder their management and obtaining the required outputs (e.g., ITMO transactions). From the design stage, it should be determined whether the registry will be linked to others, so that the IT specifications are clear from the beginning. If the host party later decides to link the registry with others, this will imply adaptations and budgets in the future.

7.1.4 Determine users

The host party should determine, based on the purposes of the Article 6 registry, the users who will have limited or unlimited access and their scope (e.g., restricted to specific modules/functions), as well as the types of reports that each user can produce. Users could include Article 6 administrators, such as those within the lead ministry, other members of the lead ministry in charge of other policies, representatives of other government agencies with relevant participation in mitigation policies (e.g., energy or forestry policies), members of technical advisory committees, activity participants, and auditors.

This task involves not only determining who will participate in the registry, but also the scope of their access, and the functions that each type of user will have within the registry (Table 9).

Table 9. Examples of functions in the registry by user types

User type	Functions	Scope
Article 6 administrator	Manage the Article 6 registry. Give access to users through account opening Authorize MOs. Execute ITMO transfers. Validate information recorded by other users.	Unlimited access as administrator of the overall registry.

(continued)

User type	Functions	Scope
Representatives of other ministries	Provide information on the implementation of specific policies. Provide key data to generate certain indicators.	Limited access. Allowed to view certain outputs.
Members of technical committees	Perform technical review and give opinions. Perform analysis of policies.	Limited access to information on mitigation activities. Allowed to view and extract certain outputs.
Activity participants	Report information about mitigation activity. Enter certain information of the activity. Attach the documents that are requirements for authorization and transfers of MOs.	Limited access to their own accounts. Receive notifications from Article 6 administrator.
Verifiers	Access limited to information on the mitigation activities they are authorized to verify. Identify inconsistencies in the information. Give a verification opinion.	Limited access. Allowed to view certain information on recorded mitigation activities.

7.2 IT capabilities and specifications required by the system

The host party will determine the IT capabilities and features that are required to develop the appropriate architecture of the registry, according to the needs and decisions made in the previous steps. Storage capacity, security, inter-operability and backup features are key to determining the budget required for the registry development.

Some of the characteristics that should be determined at this stage are:

- Inter-operability layer
- Security and user management system
- Reporting system
- Server and network architecture
- Web interfaces
- Software management
- Backup and recovery functions

- Accessibility to people with visual, auditive and other disabilities
- Include diversity of countries' languages

Box 17. General guidance for determining the IT needs of an integrated registry

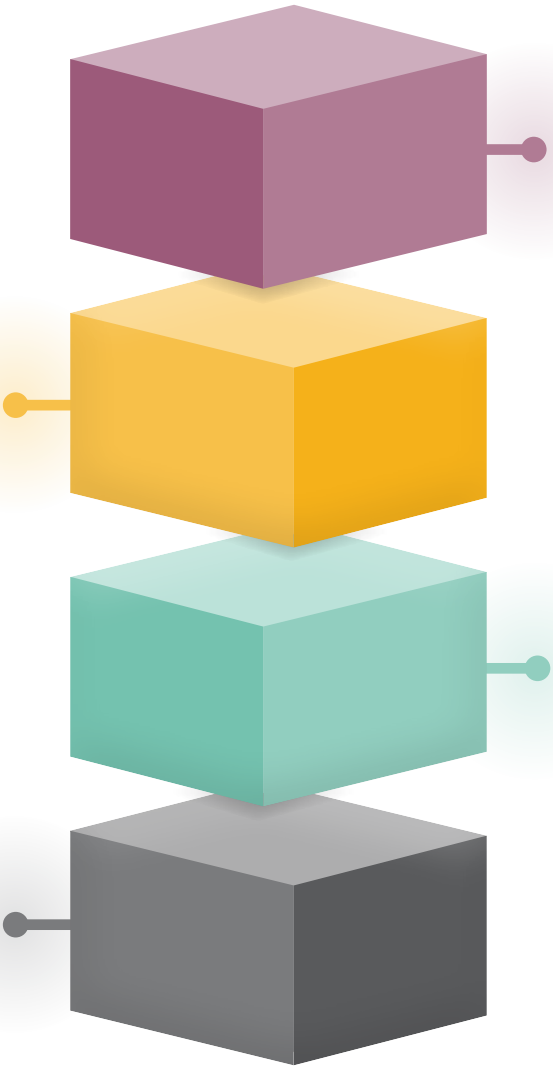
When there are systems and registries to keep records and track progress on more than one climate policy, designing a registry functional for Article 6 could be quite complex and prohibitively expensive if starting from scratch. This process implies at least some of the following steps, based on the modules that the registry could contain according to the needs, from the IT point of view.

Review registry needs and identify functional requirements:

a. number and type of documents and data points (variables) to be stored;
b. number and type of users accessing the system and the required access model;
c. definition of processes that will need to be supported by the system;
d. potential differences between standard IPCC/UNFCCC and other standardized methods of aggregation and calculation of GHG;
e. the project/facility-level to national level aggregation paths;
f. definition of data interfaces and external interoperability requirements;
g. reporting requirements, including reporting in non-UNFCCC standardized formats;
h. support requirements and the comfortable boundary between "user" and "administrator" functions.

Analyze and size data

a. What will need to be transacted, operated and archived by the system
b. simulate reporting cycles using estimated parameters
c. develop system architecture options



Review of national circumstances to identify IT capacity

a. suitable hardware;
b. reliable public or private network;
c. IT support staff capacity;
d. reference IT literacy level of the end user.

Identify non-functional requirements

a. mandates on IT security, privacy, data sovereignty and confidentiality in the national legislation and the country internal regulations;
b. performance needs and tolerances;
c. accessibility needs, standards and tolerances;
d. capacity needs;
e. analyze of possible architectural and technical harmonization based on MRV arrangements

Spherical, 2021.[13]

7.3 Implementation of the Article 6 registry

The host party should generate the terms of reference related to the development of the system in which the registry will be held. That is why the aforementioned aspects should be evaluated prior to this stage, since the costs and timeframe of this assignment can vary substantially, depending on the type and scope of the modules, functions and linkages that the registry will have.

Implementing the registry means that the personnel in charge within the lead ministry must have the appropriate training to use and maintain it. The Article 6 administration staff should include an IT expert as a person in charge or as part of the team responsible for the registry management.

Likewise, the registry developer and the lead ministry should provide relevant training to the administrative staff, as well as materials such as user guides and manuals to other users of the registry prior to its implementation, and subsequently to new users.

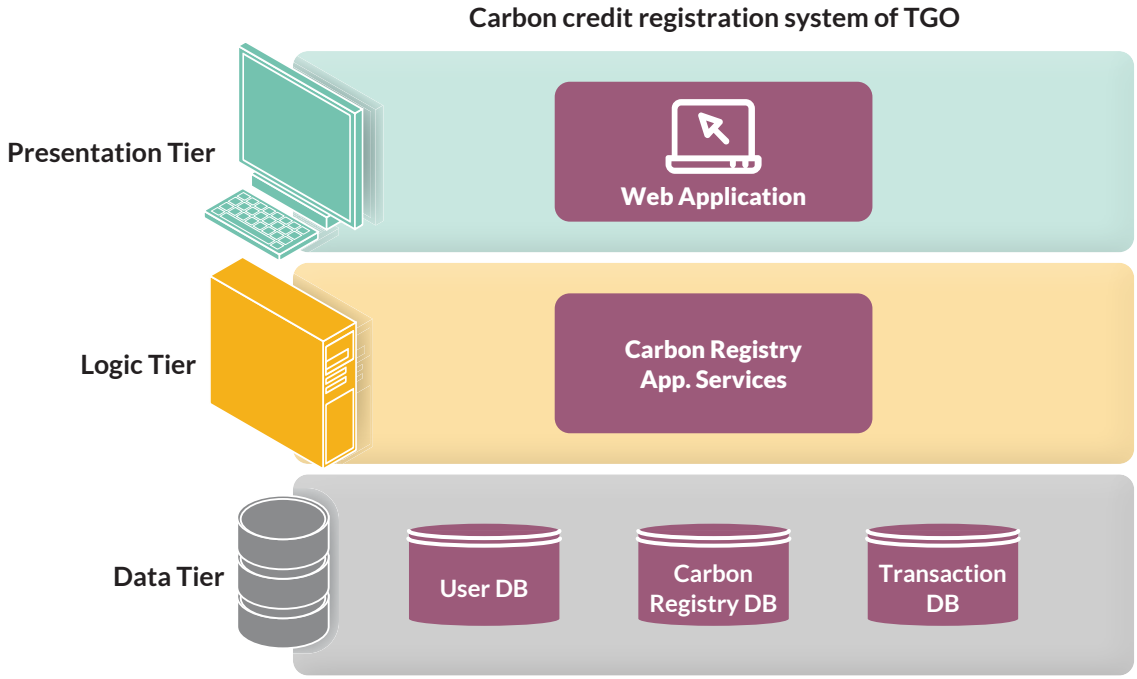
Moreover, implementing the registry starts with opening accounts to enable the users to use the tools and functions and enter the information properly. To do this, the authority may develop manuals and launch a website to keep them informed about the procedures, their roles and the use of the registry.

Box 18. Features and design process of the Thai registry

As mentioned in Box 16, in Thailand it was seen as necessary to develop a more sophisticated registry. Therefore, in 2022 TGO developed a carbon credit registry system (https://registry.tgo.or.th/) that complies with international standards such as VERRA. The system includes a dashboard, project management tools, statistics, accounts, API (application programming interface) credentials, and a database.

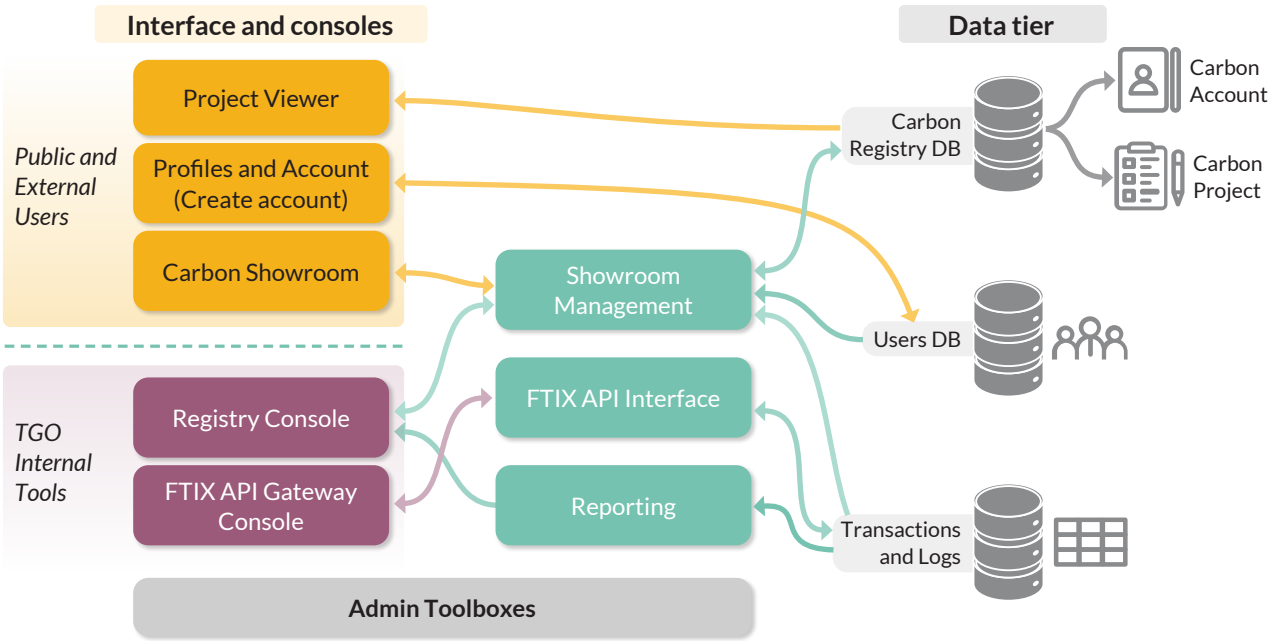
The system is based on a three tiers web base application consisting of: 1) a presentation tier; 2) a logic tier; and 3) a data tier. A user can register a project, project information is uploaded to the registry system, which is then stored in the database. The user can later view the project status and follow-up through the registry system. An operator can update the verified carbon credits and manage the project, accounts, and API permission.

Box 18. Features and design process of the Thai registry (*continued*)



Three tiers web base design

The carbon credit registry system displays project information on the website, allowing a search for information such as project identification number, project name, project owner, project type, methods for reducing GHG emissions used in calculation, project status, location, expected reduction of GHG emissions, valid start/end date of the credit period, joint benefit (co-benefit) of the project, as well as the contact details of the project owner and the user.



Box 18. Features and design process of the Thai registry (*continued*)

Registry system overview

To further improve the registry and to comply with outcomes of COP26 and COP27 of the UNFCCC (Decisions 2/CMA.3, 6/CMA.4 and their relevant annexes), TGO continued its work to further develop the system, allowing it to link to carbon credit markets and trading platforms via API, permitting the transfer of carbon credits in compliance with international practices and standards, in particular allowing the trading of ITMOs. These further ongoing improvements are related to: the display on the digital web-based platform; functions allowing the creation of accounts within the system; the assignment of unique identifier numbers for the tracking of each credit unit (consisting of identifiers, serial numbers and non-identifying metadata); a transaction system linked to a notification system; status tracking of a unit; and the creation of different accounts (such as credit deposit account, cancellation accounts, retirement account, buffer account, or reversal retirement account).

Bibliography

GGGI. "Implementing Article 6 of the Paris Agreement: Options for governance frameworks for host countries." Seoul: Global Green Growth Institute. 2023. https://gggi.org/wp-content/uploads/2023/08/GGGI_InsightBrief_07_Final.pdf

Government of Ghana. "Ghana's Framework on International Carbon Markets and Non-Market Approaches," 2022. https://gcr.epa.gov.gh/wp-content/uploads/2023/05/Ghana-Carbon-Market-Framework-For-Public-Release_15122022.pdf.

Spalding-Fecher, Randall, Paula Macias Diaz, and Diana Guzman Barraza. "Guidance on Governance Models for Host Country Engagement in Article 6. Version 2.0." Seoul: Global Green Growth Institute, November 2022. https://gggi.org/report/guidance-on-governance-models-for-host-country-engagement-in-article-6/.

UNFCCC. "Decision 2/CMA.3. Guidance on Cooperative Approaches Referred to in Article 6, Paragraph 2 of the Paris Agreement," 2021. https://unfccc.int/documents/629467.

UNFCCC. "Decision 3/CMA.3. Rules, Modalities and Procedures for the Mechanism Established by Article 6, Paragraph 4, of the Paris Agreement," 2021. https://unfccc.int/documents/460950.

Endnotes

1 Parts of this chapter are adapted from Spalding-Fecher et. al, 2022.

2 Spalding-Fecher et. al, 2022.

3 Based on paragraphs 18 to 24 of the Article 6.2 guidance.

4 GGGI, 2023.

5 Adapted from Spalding-Fecher et. al, 2022.

6 Adapted from Spalding-Fecher et. al, 2022.

7 Adapted from Spalding-Fecher et. al, 2022.

8 Adapted from Spalding-Fecher et. al, 2022.

9 GGGI, 2023.

10 Government of Ghana, 2022.

11 Spalding-Fecher et al., 2022.

12 Spalding-Fecher et al., 2022.

13 Spherical. (2021). Design of a cross-sectorial Measurement, Reporting, Verification and Registry framework for Panama. Operational and functional design of the modules and tools [Report not published for the Government of Panama].

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