THE PARIS AGREEMENT CREDITING MECHANISM AFTER COP29

Fundamentals in place, substance in progress

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Contents

CHAPTER 1

Introduction

1. Introduction

The Paris Agreement Crediting Mechanism (PACM) under Article 6.4 of the Paris Agreement represents a significant evolution in international carbon markets. It is a centralized, UNFCCC-overseen carbon crediting mechanism which allows activities[1] to generate emission reduction or removal credits, so called Article 6.4 Emission Reductions (A6.4ERs). A6.4ERs – once authorized - can be transferred internationally and used by countries toward their Nationally Determined Contributions (NDCs) or for other international mitigation purposes (OIMP).

For buyer and seller countries, project developers and investors eager to participate in this new mechanism, understanding the current state of operationalization is crucial. This paper addresses several key questions:

1. Which elements of the PACM are already in place and operational?
2. Which components are still under development, and when can they be expected?
3. What are the potential bottlenecks in the implementation process?

The paper aims to provide clarity on the PACM's operational status after the 29th Conference of the Parties to the Paris Agreement (COP29) held in Baku in November 2024, highlighting both the progress made and the work still ongoing. By distinguishing between completed components, those in development, and elements awaiting creation, we offer a comprehensive overview of the mechanism's current state.

It is important to emphasize that the PACM is a fast-developing space. At and since COP29, significant progress has been made in operationalizing various aspects of the mechanism. However, many detailed standards, procedures, and guidelines are still under development, creating a dynamic environment that requires continuous monitoring.

This paper provides a snapshot of the current state of PACM implementation as of April 2025, recognizing that additional elements may be approved or modified in the coming months. For project developers and investors, understanding both what is possible now and what to expect soon is essential for strategic planning and successful participation in this evolving carbon market mechanism.

The content is structured as follows. We provide a short overview of progress made on Article 6.4 at COP29 in Section 2. However, the focus of the paper is the operationalization status of the PACM. Section 3 discusses the elements needed for a fully operationalized mechanism, including activity cycle procedures, substantive standards, and the mechanism registry. We discuss these elements as applicable to both projects and programmes transitioning from the Clean Development Mechanism (CDM) to the PACM, and to new activities. Finally, Section 4 summarizes the PACM's operationalization and provides a forward-looking outlook on project development and credit issuances.

[1] The term 'activities' is used here as an umbrella term encompassing projects and programmes of activities as well as sectoral, policy, and jurisdictional approaches.

CHAPTER 2

Progress on Article 6.4 at COP29

2. Progress on Article 6.4 at COP29

Key decisions taken in a difficult negotiating environment

COP29 in Baku marked a significant breakthrough in the operationalization of the Paris Agreement Crediting Mechanism (PACM) under Article 6.4. After nearly nine years of negotiations, the rules governing both Article 6.2 cooperative approaches and Article 6.4 were finally completed, strengthening the regulatory framework for existing cooperative approaches and setting the stage for enhanced international cooperation through the Article 6.4 mechanism.

The journey to operationalization

The operationalization of the PACM has progressed on two parallel tracks since the Paris Agreement was adopted. The first track involved decisions by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) at annual COP conferences.

The foundation was laid at COP26 in Glasgow (2021), which established the main framework through the "Rules, modalities, and procedures for the Article 6.4 Mechanism" (RMPs). These RMPs outlined the governance structure, including the establishment of the Supervisory Body of the Article 6.4 Mechanism (SBM); defined requirements for host countries; established the basic structure of the PACM activity cycle; addressed share of proceeds (SoP) and overall mitigation in global emissions (OMGE); set up the mechanism registry and its basic functionalities; and created pathways for those CDM activities to transition to the PACM which meet all A6.4 RMP requirements.

The second track began in 2022, after the establishment of the Supervisory Body of the Article 6.4 Mechanism (SBM) at COP26 to develop detailed standards, procedures, and tools to operationalize the RMPs, as well as further develop the regulatory environment on activities involving removals, and the rules governing the application of PACM methodologies. The standards on removals and methodologies had been at the center of SBM operationalization efforts in the period 2022 to 2024.

Strategic breakthrough at SBM level

A critical strategic shift occurred in October 2024, just before COP29, when the SBM adopted standards on methodologies and removals under its own authority rather than merely forwarding recommendations on guidance to be adopted by the CMA. This approach represented a significant departure from previous COPs and was a strategic move to overcome the repeated failures at COP27 and COP28 to adopt further methodological guidance that had been blocking PACM operationalization. Failure to agree on the methodological principles had not only led to a postponement of critical decisions, without which the PACM could not be operationalized, but also contributed to the overall collapse of Article 6 negotiations at COP 28 in Dubai. By adopting these standards directly, the SBM made them immediately effective, only seeking additional guidance and endorsement at COP29. This approach helped bypass the gridlock that had characterized previous negotiations and created momentum for the Baku conference.

Comprehensive resolution at COP29

The COP29 CMA opening plenary formally endorsed the standards on methodologies and removals that the SBM had adopted in October. Building on this momentum, COP29 successfully closed all outstanding agenda items related to Article 6.4, finally establishing a fully operational PACM.

The decision made in Baku addresses several critical components. It clarifies the function of the mechanism registry and its relationship with both national and international registries. It also refines the authorization process, encouraging host countries to provide the statement of authorization as early as possible while allowing for retroactive authorization of Mitigation Contribution Units (MCUs) already issued before their first transaction. Finally, the Baku decision expands the scope of CDM projects eligible to transition into the PACM, now including afforestation and reforestation activities.

The path forward

With the completion of the regulatory framework at COP29, the focus now shifts to the detailed elaboration of CMA decisions and the standards on methodologies and removals at the SBM level. The following sections describe the state of this operationalization and provide an overview of already completed and outstanding elements.

CHAPTER 3

Fully Operationalized PACM

3. Fully Operationalized PACM

Figure 1 Main elements of a fully operationalized PACM

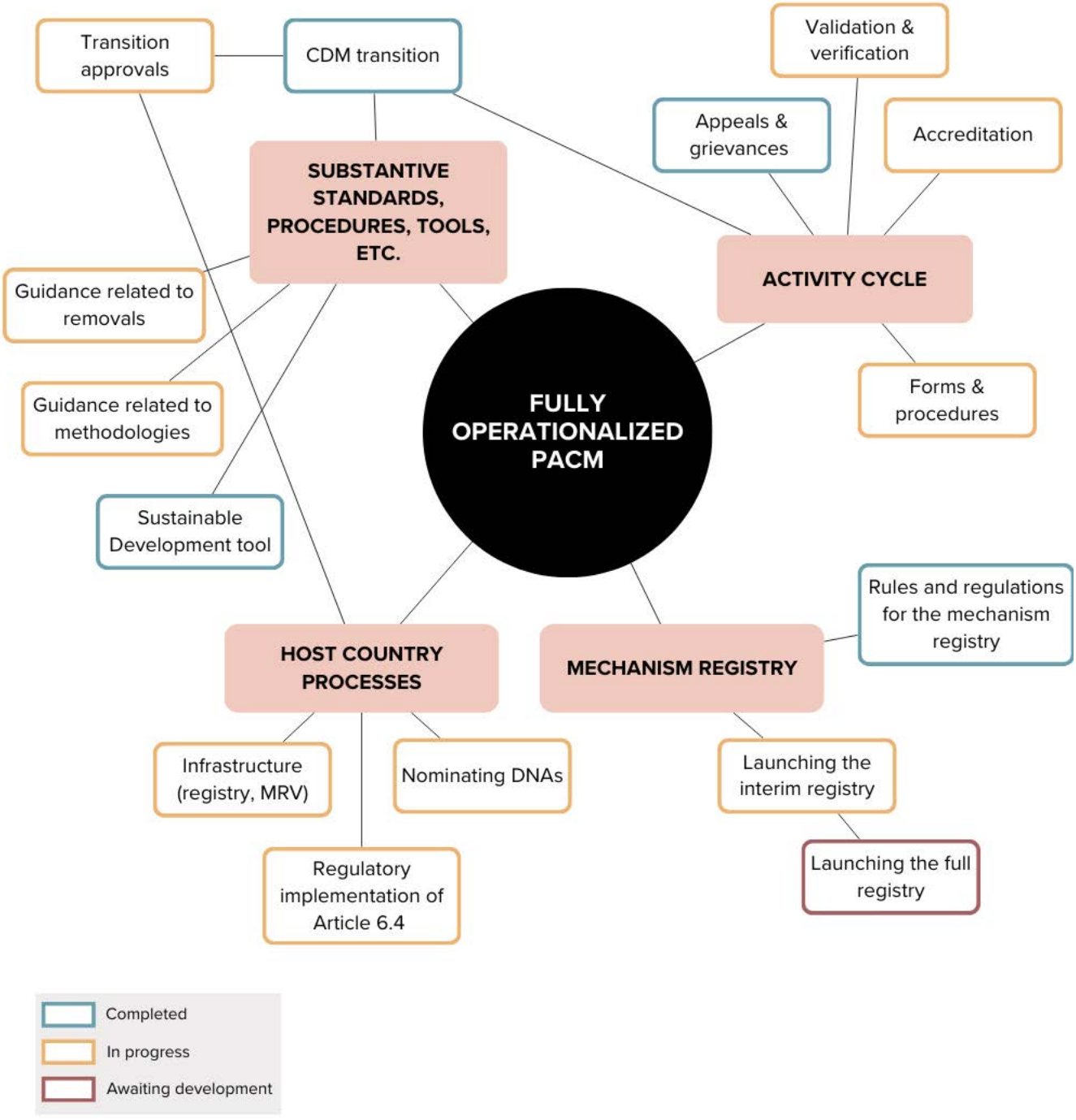


Figure 1 shows an overview of the main components needed for a fully operationalized PACM. We can broadly divide them into four categories:

1. **Activity cycle procedures** on the overall mechanism processes, validation and verification, accreditation of entities, and on the procedure for projects, programmes of activities (PoAs), and component projects under the PACM.
2. **Standards, tools, and guidelines on the substance** of the PACM, including detailed guidance on methodologies, removals, sustainable development considerations, stakeholder responsiveness, etc.
3. **The mechanism registry**, in which authorized A64ERs and MCUs are issued, transferred and cancelled.
4. **Host country processes**, including fulfilling Article 6.4 participation requirements, nominating DNAs, approving transitioning projects/programmes and new activities, implementing the regulatory environment required to participate in the PACM, implementing the necessary infrastructure (i.e., a registry as well as monitoring, reporting and verification (MRV) processes), and fulfilling reporting requirements. If credits are authorized, host countries must report on any ITMO transactions in accordance with the Article 6.2 guidance and track transfers using either the international or a national registry.

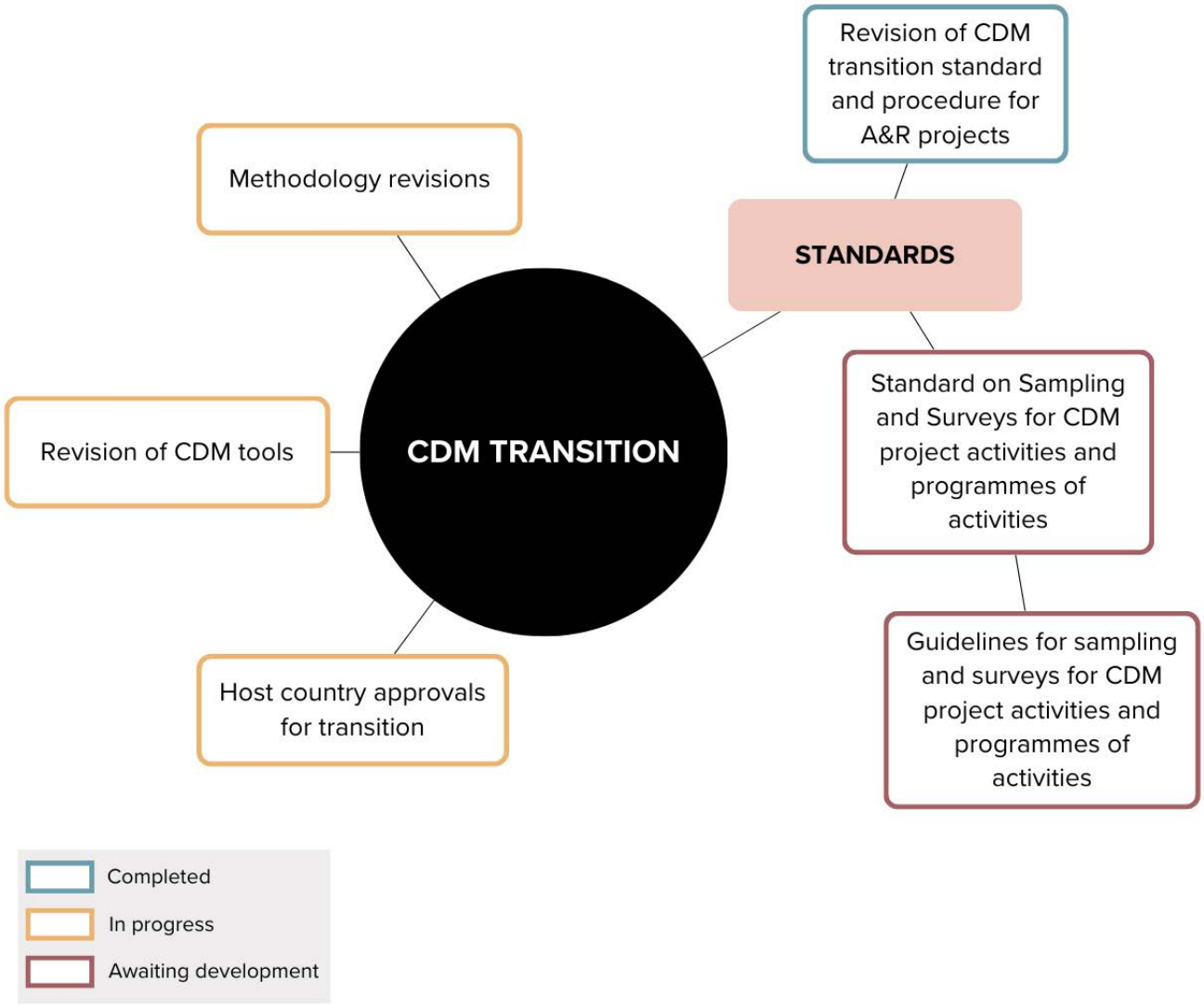
These four components are explored in detail below.[2] The following sections focus on describing their post-Baku operationalization status and the work of the SBM and its Methodological Expert Panel (MEP), including outcomes from the SBM's 15th meeting in February 2025. Section 3.1 starts by focusing on procedural elements and describing what projects or programmes have already completed or are in the process of completing – i.e., the CDM transition –, and what new activities now need to focus on – i.e., the activity cycle processes and prior consideration notifications. Section 3.2 continues with the forward-looking description and analyzes which elements are in place and which are in progress or awaiting development for methodologies, removals, and related guidances. Section 3.3 then briefly considers the status of operationalizing the registry as the most important infrastructural element of the PACM.

[2] With a limitation on host country processes. This paper focuses on the processes, substantive standards, and registry considerations that are primarily **relevant to project developers**, and it does not consider the implementation of the Article 6.4 mechanism in host countries. Some relevant considerations directly affecting project developers are included (e.g., host country approvals for transitioning projects) but the status of regulatory and infrastructure (registry, MRV) implementation is omitted.

3.1. Activity cycle procedures

CDM transition

Figure 2 Main CDM transition elements



The CDM transition standard & procedure have been in place since 2022, with the original deadline for activities to indicate their intention to transition being 31 December 2023. Projects and programmes of activities (PoAs) have already completed the first steps since then - 1478 activities that have requested transition have also already undergone the Global Stakeholder Consultation process. Therefore, the regulatory environment for the CDM transition and its processes are well-established. In 2025, the SBM and MEP will consider one final piece of regulatory work on the CDM transition, the standard and guidelines for sampling and surveys for CDM project activities and PoAs. These guidances are set to be developed in the first half of 2025.[3]

[3] See the 2025 work plan of the SBM. The remaining CDM documents will be considered at the SBM's 17th meeting, set to take place on 4-8 August 2025.

At its 15th meeting in February 2025, the SBM also approved the transition of the first project, a cookstoves PoA in Myanmar. With this, the first milestone of a project completing transition has been reached, and the first issuances of credits from this project are within reach (pending the launch of the interim registry, see Section 3.3 below). To populate the PACM project pipeline and create a supply of A6.4ERs, transitioning projects are also awaiting host country approvals. So far, Bangladesh, Bhutan, the Dominican Republic, Ghana, Myanmar, and Uganda have provided approvals for transition, to 33 projects and PoAs.

At COP29, a new category of CDM projects was allowed to transition to the PACM. Specifically, afforestation and reforestation (A/R) projects under the CDM can now transition, provided they adhere to the updated PACM rules. The deadline for submitting a transition request and securing host country approval is December 2025 – a relatively short timeline. At SBM 015 in February 2025, the SBM updated the transition standard and procedure to accommodate A/R projects. A/R projects need to comply with the transition procedure and deadline as well as the standard on activities involving removals. Additional guidance based on the removals standard is set to be developed in the course of 2025; therefore, transitioning A/R projects will need to submit additional documentation in the course of 2026 to show compliance with the removals standard and related guidance.

Another ongoing element related to the CDM transition is the review of CDM methodologies and tools, which is considered in Section 3.2 below.

New activities

For new projects, PoAs, and component projects (CPs), there are several standards and procedures already in place that enable moving ahead with the development of new projects for the Article 6.4 project pipeline:

- The Article 6.4 activity standard for projects and the Article 6.4 activity standard for programmes of activities (PoAs) set out the basic requirements and steps on the design and implementation of Article 6.4 projects, programmes of activities, and component projects of programmes of activities.
- The activity standard for projects and PoAs also includes provisions for prior consideration notifications, which signal project participants' intention to register a new activity under the PACM.
- Activities will also need to be validated and verified by the Designated Operational Entities (DOEs).[4] This is done based on the Article 6.4 validation and verification standards for programmes of activities and projects. In addition to the activity standards described above and intended for use by project developers, these documents provide an overview of the requirements that projects and PoAs need to comply with to be registered under the PACM, and eventually issue credits.

The first step for new activities under the PACM is submitting a prior consideration notification, within 180 days after the activity's start date.[5] Prior consideration notifications signal project participants' interest in registering a project with the PACM. Although parts of the PACM are still

[4] A DOE is an entity confirmed by the SBM as being qualified to perform the following functions: 1) assess an activity or programme of activity against the rules of the PACM; 2) if the assessment is positive, submit a registration request for the activity or programme of activity to the SBM; 3) review, verify, and certify the emissions reductions achieved by an activity or programme of activity during its implementation; 4) if the outcome of verification is positive, submit a request to the SBM for the issuance of emission reduction units (ERs) to the SBM; and 5) if the crediting period of a project or programme of activity is to be extended, perform an assessment of the necessity of updating elements of the project design (e.g., methodology, baselines, additionality, etc.). See Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement.

[5] The forms to submit prior consideration notifications for projects, programmes of activities, and component projects can be found on the UNFCCC website: https://unfccc.int/process-and-meetings/the-paris-agreement/paris-agreement-crediting-mechanism/A64_prior_consideration#Registering-an-A64-project-programme-of-activity-or-component-project-

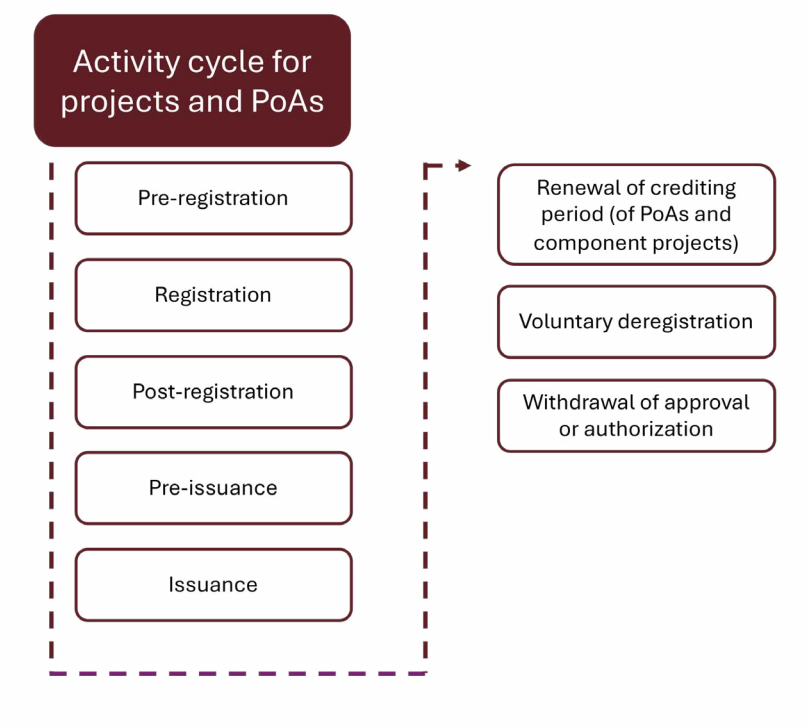
under development, including the substantive standards based on which projects can be developed and assessed (see Section 3.3 below), there is already a significant amount of submitted prior consideration notifications.

After this step is completed, project participants need to follow the activity cycle, outlined in Figure 3 below. The main steps project participants need to take are:

- **Submit a project design document (PDD) or programme of activities design document (PoA-DD) and supporting documentation.** These documents must include various categories of information including general activity description (purpose, location, technology, participants), information on methodologies and baselines, demonstration of additionality, assessing non-permanence risks and reversal risks, the calculation of emission reductions or removals, monitoring plan, crediting period, and SD tool assessment.
- **If the project is a programme of activities (PoA), include component projects (CPs).** To include a CP in a registered A6.4 PoA, activity participants must submit a completed Component Project Design Document (CP-DD).
- **PDD/PoA-DD/CP-DD validation.** Designated Operational Entities (DOEs) must validate the project, programme, or component project design document. Although timelines are specified for some parts of this process (e.g., for checks performed by the UNFCCC secretariat), there is no specific overall timeline within which the entire validation process should be completed. The overall duration of validation will vary depending on the complexity of the project or programme, any issues identified during the process, and how quickly project participants can respond to DOE requests for changes and clarifications.
- **Complete an assessment based on the Sustainable Development Tool.**[6] The SD tool applies to all A6.4 activities, including CDM activities transitioning to the Article 6.4 mechanism. The tool provides a structured approach for activity participants to conduct risk assessments to identify, evaluate, and mitigate social and environmental risks; assess potential positive and negative impacts on the 17 SDGs and host Party SD priorities, establishing SD monitoring indicators; and monitor and report outcomes against established environmental, social, and SD indicators.
- **Prepare a monitoring report to verify GHG reductions or removals for projects and PoAs.** Activity participants must prepare a monitoring report for each monitoring period after 2020. For verification, the monitoring report and supporting documents must be submitted to a DOE accredited in the relevant sector. The DOE assesses both quantitative and qualitative information on GHG emission reductions or removals in monitoring reports submitted by the project participant.
- **Update documents and respond to clarification requests, if necessary.** There are several points of validation, verification, completeness checks, and potential appeals and grievances in the activity cycle procedure that may require input from project participants and/or updates to already submitted documentation.
- **Pay the necessary fees.** There are four categories of fees: the registration fee, the post-registration change fee, the issuance fee, and the renewal fee. The activity cycle procedures for projects and PoAs contain the schedule and modalities of all categories of fees (see Appendix 1 of each procedure).

[6] A short overview of the SD tool's importance and process is available here: https://unepccc.org/wp-content/uploads/2024/10/20241010-news-and-technical-analysis-on-adoption-of-a64-sd-tool.pdf

Figure 3 Activity cycle overview



There are also **steps taken by host countries** which are essential to the process and project participants should be aware of:

- **Host country participation in the PACM.** Host countries must comply with some requirements to participate in the PACM, including submitting a host country participation form. What is especially relevant for project participants is that this form should specify the types of activities a country would consider approving within the PACM, and also its Designated National Authority (DNA), which will also be the main contact point for PACM-related matters for project participants. Country DNAs, including information on whether a country has submitted the host country participation requirement form, is available on the UNFCCC website.
- **Host Party approval and host Party authorization of activity participants.** After preparing a PDD or PoA-DD, they require host party DNA approval within 60 days of their publication. If it is a PoA with multiple host Parties, each host Party's DNA must provide approval for activities within their jurisdiction. After approval, the participating Party or Parties in a project or PoA provides authorization of activity participants.
- **Authorization of A6.4ERs.** Host countries provide a statement of authorization, latest before the first issuance of A6.4ERs from a project. [7] As part of their statement, Parties have the option to either fully or partially authorize, or choose not to authorize, the use of A6.4ERs for Nationally Determined Contributions (NDCs) or Other International Mitigation Purposes (OIMP). Alternatively, they can opt to issue Mitigation Contribution Units (MCUs), which are intended for domestic or voluntary use, while deferring the decision on their authorization. These MCUs may later be retroactively authorized, effectively enabling host countries to approve their use and commit to the required corresponding adjustments at a later stage. However, such retroactive authorization is only possible if the MCUs have not been transferred and remain in the mechanism registry's account where they were issued.

[7] A template on host Party authorization has been prepared by the UNFCCC secretariat and is available here for both projects and programmes of activities: https://unfccc.int/process-and-meetings/bodies/constituted-bodies/article-64-supervisory-body/rules-and-regulations#Forms

Overall, the main steps and requirements of the process are now laid out. Project participants can start developing projects, submitting prior notifications, and preparing project design documents. However, they need to consider host country readiness and the availability of PACM methodologies in the process. Progress on PACM methodologies is considered in Section 3.2 below. On host country readiness, host countries need to have standards and processes in place to perform necessary steps in the process. This includes submitting a host country participation form[8] and designating DNAs, having processes in place for approval and authorization, and regulations, frameworks or strategies that determine which kinds of projects can be approved within the specific country context.

3.2. Substantive standards

In addition to having the procedural standards outlined above in place, a fully operational PACM needs substantive standards for projects to follow. The SBM has developed two key documents that are crucial for the development of mechanism methodologies and Article 6.4 activities:

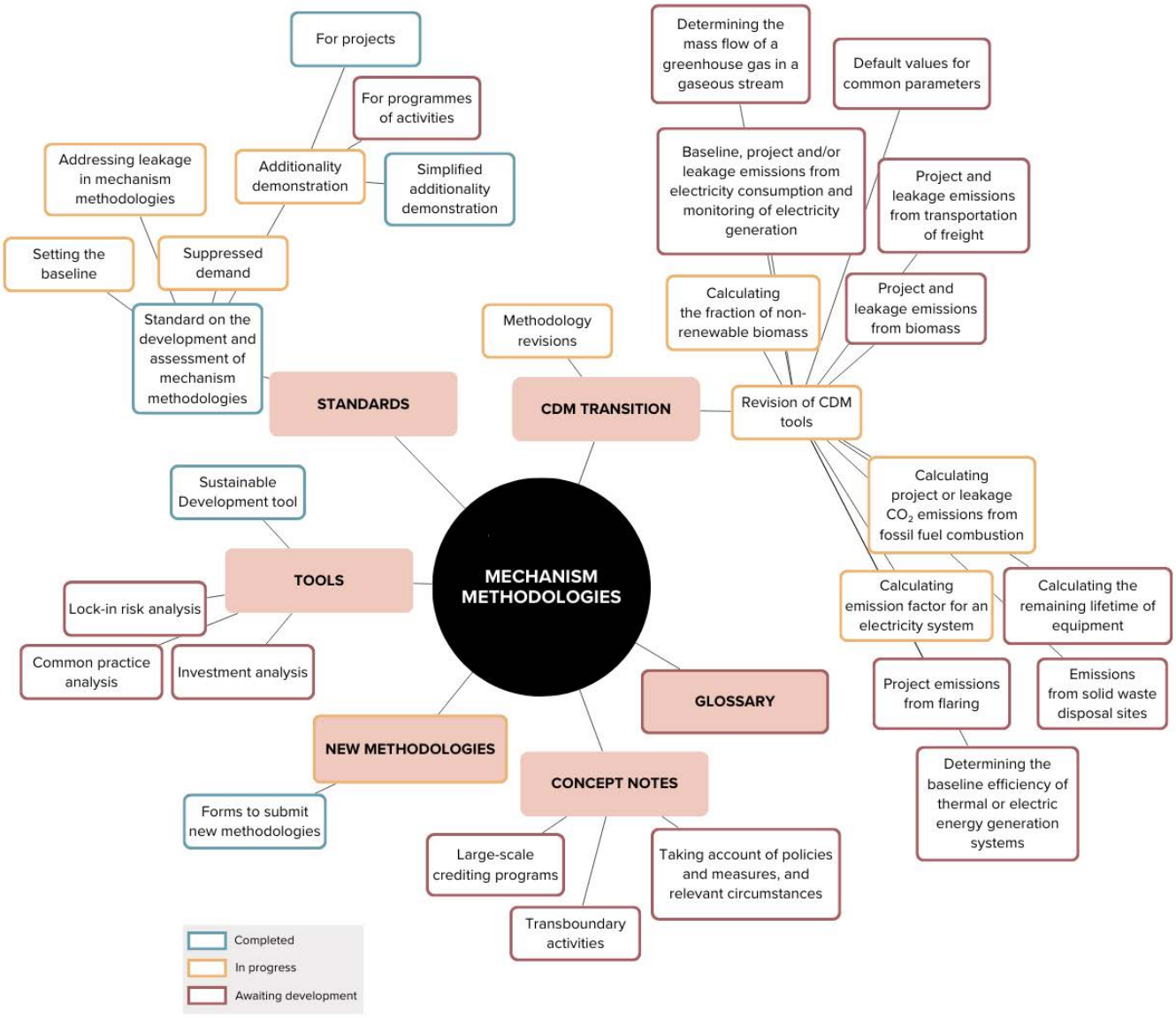
- **Standard on the requirements and assessment of Article 6.4 mechanism methodologies.** The methodologies standard covers aspects such as baseline setting, additionality demonstration, and monitoring approaches, intending to ensure consistency and environmental integrity across different methodologies.
- **Standard on requirements for activities involving removals under the Article 6.4 mechanism.** The removals standard addresses the additional requirements to govern removals activities, tackling the risk of reversal, and clarifying related monitoring obligations and methodological requirements.

Both standards were adopted by the SBM in October 2024 and endorsed by the CMA at the opening plenary of COP29. They provide clarity on the possibilities and constraints in approving methodologies. This clarity is essential for project developers, financiers, validators, and national authorities involved to start engaging with the PACM and developing new projects. Still, many of the provisions contained in these standards are still awaiting elaboration (see the sections below). In 2025, the SBM and the MEP will expand upon the contents of the standards. The 2025 workplan of the SBM includes a total of **79 different documents for consideration**. From these documents, the COP29 decision on Article 6.4 encouraged the SBM to prioritize work on baselines, downward adjustment, standardized baselines, suppressed demand, additionality, leakage, non-permanence and reversal risks, reversal risk assessments, and remediation measures.

[8] Information on how to complete and submit a Host Party participation requirement form can be found on the UNFCCC website: https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/national-authorities#How-to-complete-and-submit-a-Host-Party-participation-requirement-form

Methodologies

Figure 4 Substantive standards: Main methodology elements



See Figure 4 for a visual overview of standards, tools, and concept notes under the umbrella of mechanism methodologies. There are a series of standards in the planning and to be developed.[9] Apart from the main standard on the development and assessment of mechanism methodologies, there are two documents already completed:

- The standard on additionality demonstration. The SBM adopted this standard at its SBM 015. The standard, which is only applicable to projects and awaiting elaboration regarding programmes of activities and large-scale crediting, outlines extensive additionality requirements that methodologies need to incorporate.

[9] See https://unfccc.int/process-and-meetings/the-paris-agreement/paris-agreement-crediting-mechanism/methodologies#Development-of-A64-methodologies-and-methodological-tools-, "Developing methodologies and methodological tools".

- The Sustainable Development tool. In addition to its main standards on methodologies and removals, the SBM developed in October a mandatory Sustainable Development tool (SD tool). It consists of 11 principles with evaluation criteria and risk assessment tools to evaluate and communicate SDG co-benefits as well as risks against SDGs. It encompasses three main components: environmental and social safeguards, which address potential adverse impacts; sustainable development impact assessment, which evaluates both positive and negative contributions; and validation and verification, ensuring compliance throughout the crediting period.

In addition, the draft standard on setting the baseline in mechanism methodologies was discussed and recommended for adoption at SBM 015, but it was sent back to the MEP for further work, with feedback from the SBM mainly concerning provisions on the downward adjustment of baselines as well as provisions on best available technology (BAT) baselines.[10]

Another major element of the SBM's and the MEP's workplans for 2025 is the revision of CDM methodologies and the development of new mechanism methodologies. The MEP is currently reviewing six CDM methodologies on transportation, energy, waste, distributed systems (clean cooking, water purifier), and rural electrification (see Box 1).[11]

Box 1 CDM methodologies under review by the MEP. Source: 2025 MEP workplan.

- **ACM0002:** Grid connected electricity generation from renewable sources
- **AMS-I.D.:** Grid connected renewable electricity generation
- **AMS-I.C.:** Thermal energy production with or without electricity
- **ACM0001:** Flaring or use of landfill gas
- **AMS-II.G.:** Energy efficiency measures in thermal applications of non-renewable biomass;
- **AMS-I.E:** Switch from non-renewable biomass for thermal applications by the user

In addition, anyone, including project proponents, governments, and voluntary market certifiers can propose methodologies to the Supervisory Body. The standard on mechanism methodologies further clarifies the common requirements of Article 6.4 methodologies, at a high-level, outlining the principles to which they should respond. It encourages flexibility in design, which can allow projects to be tailored to specific regional or sectoral needs. The review process for non-CDM methodologies is expected to involve a case-by-case assessment when they are used in the context of proposed Article 6.4 activities, to be reviewed by the Methodological Expert Panel and approved by the SBM. Although certain aspects of methodology development are still under consideration at the SBM and MEP, stakeholders may already develop and submit new mechanism methodologies for consideration[12] and move the process forward in a bottom-up manner.

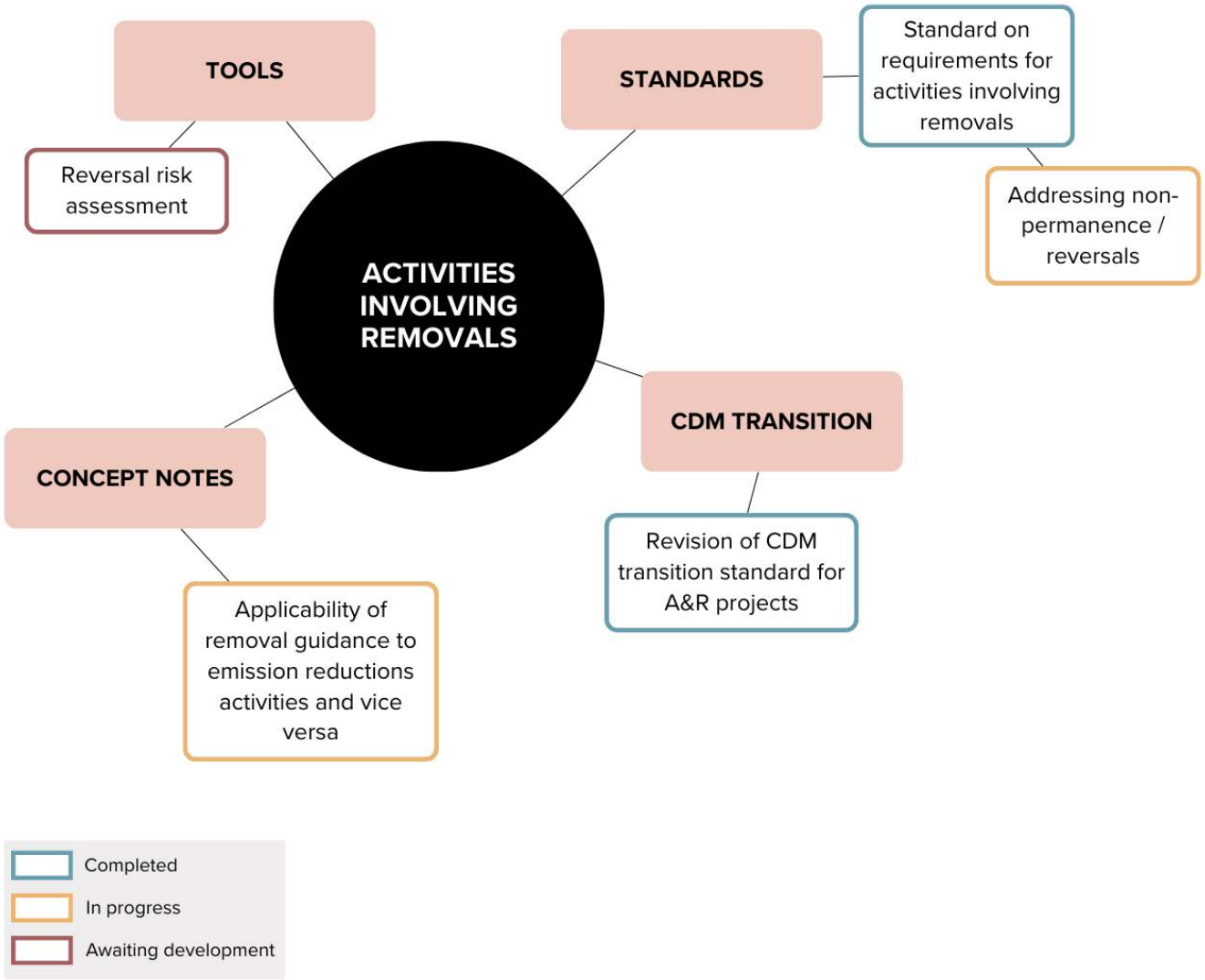
[10] SBM 15 meeting report: https://unfccc.int/sites/default/files/resource/A6.4-SBM015.pdf.

[11] 2025 MEP workplan: https://unfccc.int/sites/default/files/resource/A6.4-SBM015-A02.pdf.

[12] See the submission process and requirements at: https://unfccc.int/process-and-meetings/the-paris-agreement/paris-agreement-crediting-mechanism/methodologies#Methodology-Submissions.

Removals

Figure 5 Substantive standards: Main removals elements



See Figure 5 for a visual overview of elements under the umbrella of activities involving removals. The removals standard adopted by the SBM in October 2024 opens the door for new removal project types under Article 6.4, broadening the market beyond traditional emission reduction projects and potentially including engineered removal credits. It has the potential to significantly expand the scope of carbon credit projects through the inclusion of carbon removal technologies such as direct air capture (DAC), bioenergy with carbon capture and storage (BECCS), soil carbon sequestration, and enhanced weathering. The decision gives a broad definition of removals activities as "the outcomes of processes by which greenhouse gases are removed from the atmosphere as a result of deliberate human activities and are either destroyed or durably stored through anthropogenic activities" and defines the list of eligible removals activities based on their accounting performance.

The standard outlines broad requirements that removals activities and methodologies must observe. For monitoring, the standard requires activity participants to ensure robust, statistically representative measurements using various data sources. Methodologies must specify monitoring approaches for all parameters needed to calculate removals, with conservative calculation of net removals that account for uncertainties. Quality assurance measures are mandatory, and monitoring plans must be regularly reviewed and updated. Regarding reporting, participants must prepare monitoring reports after implementing monitoring activities, including descriptions of methods used, estimated net removals

with associated uncertainty, and records of any GHG release events. Reports must be prepared without gaps between consecutive monitoring periods, with submission frequency between one and five years. Additional reports must be submitted following any observed GHG release event that could lead to a reversal. The standard also requires continued monitoring after the crediting period ends to assess whether reversals have occurred and confirm continued GHG storage.

In the course of 2025, the requirements of this standard will be further elaborated. Points of particular interest on removals in connection with the environmental integrity of the PACM include determining what is an avoidable versus unavoidable risk of reversal, what are the different risk categories, and how the buffer pool is designed.

The way forward on methodologies and removals

The standards aim to address integrity issues present in existing carbon crediting programs, potentially leading to higher-quality credits. This may increase initial costs and complexity; however, it could ultimately enhance the market value and reputation of the credits.

Developers are advised to plan strategically – the MEP is working on reviewing the first CDM methodologies for use in the PACM, and the first set of Article 6.4 methodologies is planned to be considered by the SBM for finalization from August 2025 onwards.[13] This timeline will be critical for project developers to align their project proposals with the latest standards and methodologies. In the longer term, the second wave of methodologies will introduce more diverse project types, allowing developers to adjust their project plans accordingly to capture emerging opportunities in the market. This phased approach means that developers can pace their engagement with the PACM based on available methodologies.

In conjunction with these developments, the UNFCCC secretariat and the SBM are likely to provide capacity-building activities to assist stakeholders in understanding and meeting the Article 6.4 requirements. Standards, tools, and guidances under development are also posted for calls for input from stakeholders on a regular basis, allowing for direct engagement with the development of the PACM's detailed regulations.

3.3. PACM infrastructure: Registry

The key piece of infrastructure for the PACM is the mechanism registry, which has been in development since 2024. The decision on Article 6.4 at COP29 established connectivity between the mechanism registry and the Article 6.2 international registry. Authorized A6.4ERs (AERs) will be able to move from the mechanism registry to a Party's registry, whereas Mitigation Contribution Units (MCUs) remain confined to transactions within the mechanism registry. Parties and various entities (project developers, investors, public and private entities, etc.) will have the option to open holding accounts directly within the mechanism registry, allowing them to receive and manage MCUs.[14]

After COP29, the SBM progressed with registry operationalization at its 15th meeting in February 2025. The secretariat has developed the interim mechanism registry capable of holding A6.4ERs and CDM Certified Emisssion Reduction credits (CERs) eligible for transition and use in the first NDC period. The aim is for the interim registry to be operational by the first half of 2025 and for the full registry to be developed in 2025. SBM 015 considered this registry and adopted procedures for its operation. There is, however, no official launch date yet for full user access. The SBM requested

[13] See 2025 MEP workplan: https://unfccc.int/sites/default/files/resource/A6.4-SBM015-A02.pdf.

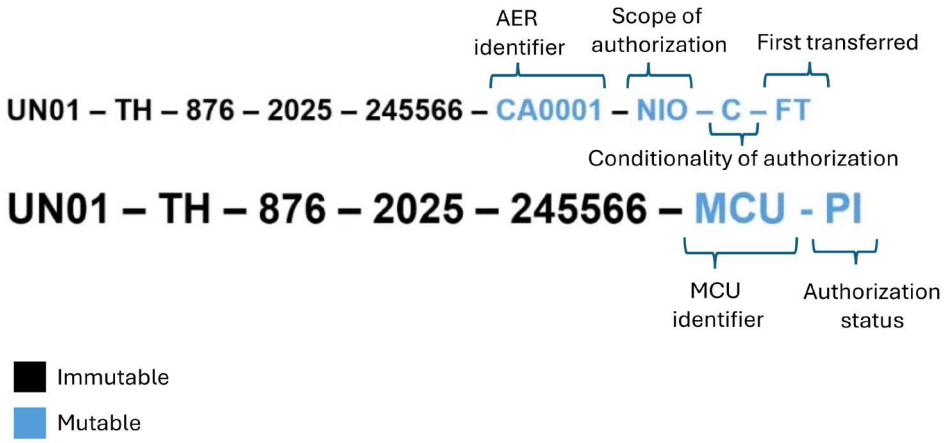
[14] See Decision 7/CMA.4. Guidance on the mechanism established by Article 6, paragraph 4, of the Paris Agreement. Annex I. Paragraph 43. (UNFCCC, November 2024). Available at https://unfccc.int/sites/default/files/resource/cma2023_10a02E.pdf.

the secretariat to develop this detailed user guidance in addition to setting up safeguards ensuring the equal treatment of credit types (MCUs and AERs), and procedures allowing for financial security pledges.

The interim registry is based on the CDM registry's environment, ensuring familiarity for users. Users will be able to create and view their accounts, approve and follow transfers between holding accounts, and search the registry based on account name, identifier, status, type, and holder. Projects can be listed, and credits can be issued and tracked. The SBM has also agreed on the serialization of credits (see Figure 6). The serialization consists of:

- An immutable part (in black), including, in order, the issuing registry identification, the host country identifier, the Article 6.4 activity identifier, the vintage, and the serial number; and
- A mutable part (in blue), identifying whether the credit is an AER or MCU, adding specific elements for each credit type:
  - For MCUs, its identifier ("MCU") and authorization status ("PI" if an MCU can be authorized post-issuance, "NPI" if it cannot)
  - For AERs, its unique identifier, a marker which shows the scope of authorization ("N"-NDC, "I"-international mitigation, "O"-other), whether the authorization is conditional ("C"), and a marker to show whether the credit has been first transferred ("FT")

Figure 6 A6.4ER serialization. Adapted from SBM15 presentation on 13 February by UNFCCC secretariat



The launch of an operational interim registry will be a significant milestone in the PACM's infrastructural readiness. Experts and negotiators at COP29 anticipated a late-2024 release of the interim registry and an early-2025 release of the full mechanism registry; however, the procurement for the full mechanism registry was canceled in December 2024 and its resolicitation is pending. Although the registry launch timeline is uncertain for both the interim and the full registry, the SBM's and the secretariat's progress ensures that the necessary elements for issuing and tracking credits are in place.

CHAPTER 4

Summary: Post-Baku PACM Readiness

4. Summary: Post-Baku PACM Readiness

The full operationalization of the PACM has made significant progress at and following COP29 in Baku, with several procedural and substantive elements now in place. Taking stock of the current state of operationalization, project developers can already take several concrete steps while awaiting the completion of remaining regulatory and infrastructure elements.

Project development can begin

Project developers can currently submit prior consideration notifications to signal their intention to register activities under the PACM. They can begin developing PDDs or PoA-DDs based on existing standards and in anticipation of new key elements of updated methodologies, with the caveat that the development of PDDs or PoA-DDs can only be finalized once PACM methodologies are in place. For eligible CDM projects, developers can complete the transition process after obtaining host country approvals for transition, as demonstrated by the first approved transition of a cookstoves PoA in Myanmar in February 2025. Additionally, developers can prepare for sustainable development assessments using the adopted SD tool, submit new methodologies through the bottom-up process, and engage with host countries to ensure that projects are in line with the host country's requirements for activity approval.

Key elements on methodologies and removals still under elaboration

Despite significant progress, several critical elements remain under development. For methodology development and revision, the top-down development of the first set of Article 6.4 methodologies is in progress, with six CDM methodologies under review by the MEP and planned to be considered by the SBM from August 2025 onwards. Additional standards and tools for methodologies still need elaboration. For removals activities, further guidance is needed on determining avoidable versus unavoidable reversal risks, defining risk categories and buffer pool design, and establishing additional documentation requirements for transitioning A/R projects based on the removals guidance.

Interim and full registry implementation still in progress

Regarding registry implementation, the interim registry has been developed but awaits official launch (expected in first half of 2025), user guidance for the registry still needs to be developed by the secretariat, and the full registry development timeline remains uncertain after procurement cancellation.

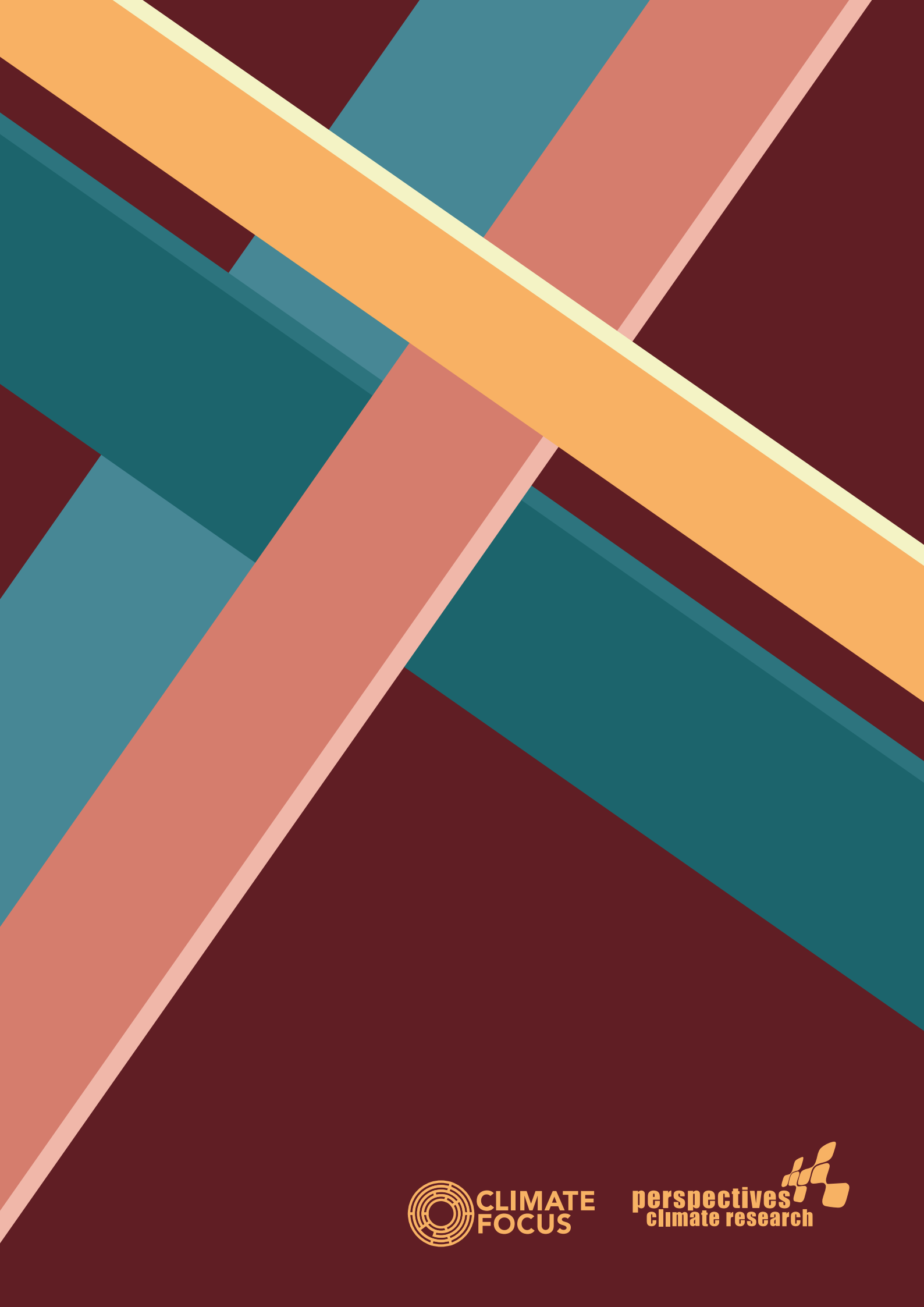
Uncertainties on detailed methodological and removals documents, host country implementation, and registry implementation creating a bottleneck

The full implementation of the PACM faces several challenges. On the SBM and MEP level, the main procedural elements and key standards on methodologies and removals are in place but detailed standards, procedures, guidelines, and methodologies are still under development and in the process of resolving crunch issues, creating a bottleneck for new project development. Part of the implementation burden also falls on host countries to establish necessary regulatory frameworks, including submitting host country participation forms, designating DNAs, creating processes for approvals and A6.4ER authorizations, and developing regulations for eligible project types, as well as potentially standardized baselines. As of January 2025, 98 countries have nominated DNAs and

15 have submitted host country participation forms. As of April 2025, a limited number of host countries have provided approvals for transitioning projects and PoAs: Bangladesh (11 approvals), Bhutan (3 approvals), Dominican Republic (3 approvals), Ghana (2 approvals), Myanmar (4 approvals), and Uganda (13 approvals). Further, project developers face uncertainty about which updated methodologies will be approved and how stringently standards will be applied, particularly for removals activities. Registry delays and the uncertain timeline for implementation may delay the issuance and transfer of credits, even for projects that have completed all other requirements.

Gaining momentum for first A6.4ER issuance and the development of new projects

While the first supply of A6.4ERs is expected to emerge in the first half of 2025 from transitioning CDM projects, new projects will likely gain momentum at the earliest in the latter part of 2025 or in early 2026 as updated and new methodologies will be approved and regulatory frameworks mature. The first A6.4ERs from new projects may be expected to materialize in the course of 2026. The significant interest already demonstrated through prior consideration notifications suggests substantial potential for the PACM once these remaining elements are in place. Now, a collaborative effort from all stakeholders is required to fully operationalize the PACM.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