



9 December 2025 | Agora, UNEP Headquarters

High-integrity carbon markets: Impact and path to accelerated climate action



Agenda (1/2)



Duration	Block Name	Format	Speaker
15 min	Welcome and Opening Remarks	Remarks	Inger Andersen, Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme
10 min	Current status and trends in carbon markets	Scene Setter	Gabriel Labbate, Head of the Climate Mitigation Unit and Global Team Leader of the UN-REDD Programme
50 min		Panel Discussion	Moderator: Gabriel Labbate Panellists: <ul style="list-style-type: none">• Andrea Abrahams, Managing Director VCM, IETA• Chinga Mazhetese, Regional Officer, ICAO• Cristina Fróes de Borja Reis, Extraordinary Secretary for Carbon Market, Ministry of Finance, Brazil• Olufunso Somorin, Regional Climate Head, Climate Change and Green Growth Program, African Development Bank
10 min	Coffee Break	Break	-

Agenda (2/2)



Duration	Block Name	Format	Speaker
20 min	Global Article 6 Pipeline	Presentation	Karen Olsen, Senior Advisor, UNEP CCC
15 min	Market dynamics and finance mobilization	Scene Setter	Fundile Maphanga, Policy Lead, AlliedOffsets
50 min		Panel Discussion	<p>Moderator: Micaela Passetti, Carbon Markets Specialist, UNEP</p> <p>Panellists:</p> <ul style="list-style-type: none"> • Andrew Weiner, Head, Business Development for Environmental Markets, Emsurge • Luke Cillie, Senior Consultant, EY's Global Center for Climate policy • Omon Ukpoma-Olaiya, Regional Investment Team Lead for East and Southern Africa and the Arab States Region, UNCDF • Roselyn Adjei, Senior Advisor Consultant, Environmental Defense Fund
10 min	Closing Remarks	Remarks	Mirey Atallah, Chief of the Adaptation and Resilience Branch, Climate Change Division, UNEP

Opening remarks



**Inger
Andersen**

Under-Secretary-General of the United Nations and Executive Director of the United Nations Environment Programme

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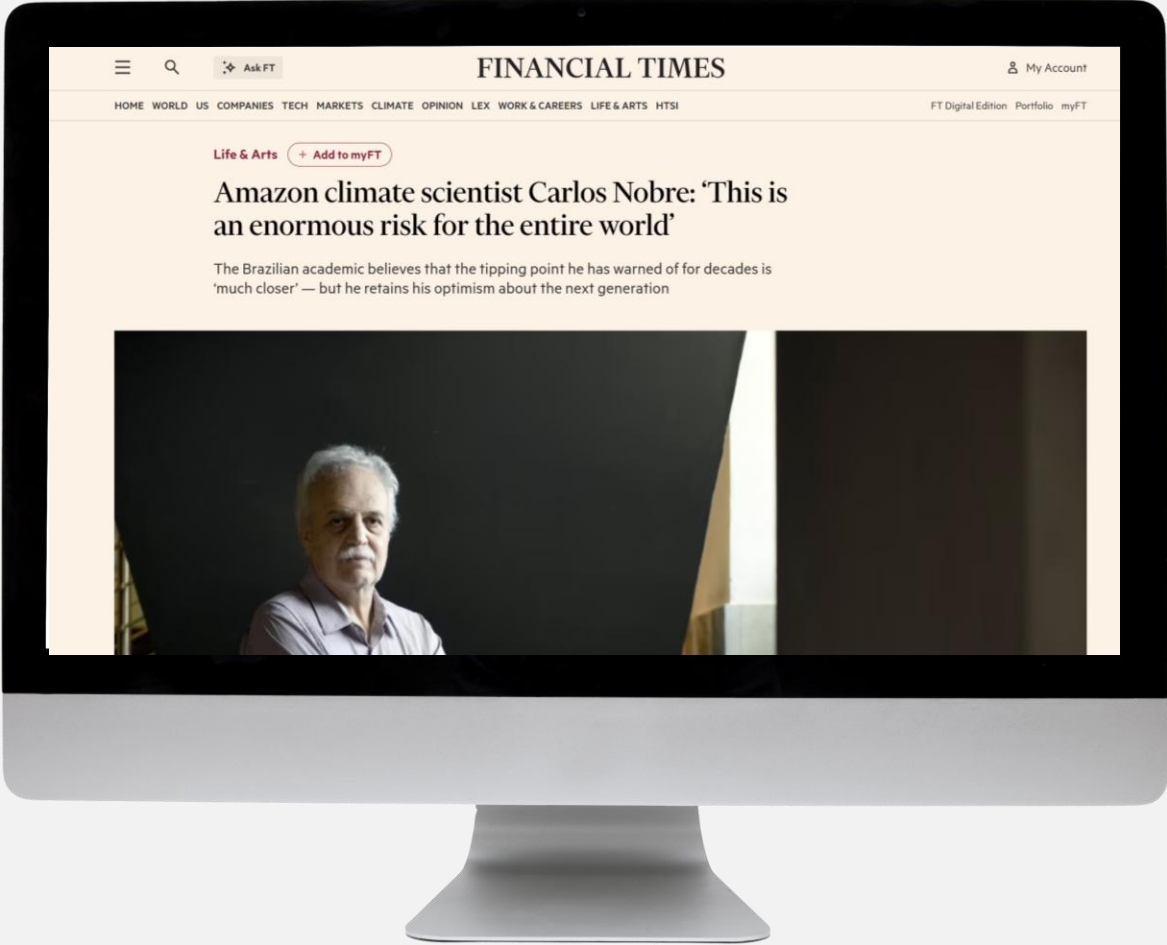
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Current status and trends in carbon markets



We are running out of time



The use of carbon pricing mechanism is growing



Carbon pricing



80 emissions trading systems and carbon taxes implemented globally

Plus ETSs planned in Brazil, India and Turkiye



28% of global emissions covered by a direct carbon price, compared to -5% in 2005



USD 100+ billion In revenues raised for second consecutive year

Over 50% of revenue was used to support environmental, infrastructure, and development projects

Carbon markets show significant potential to scale



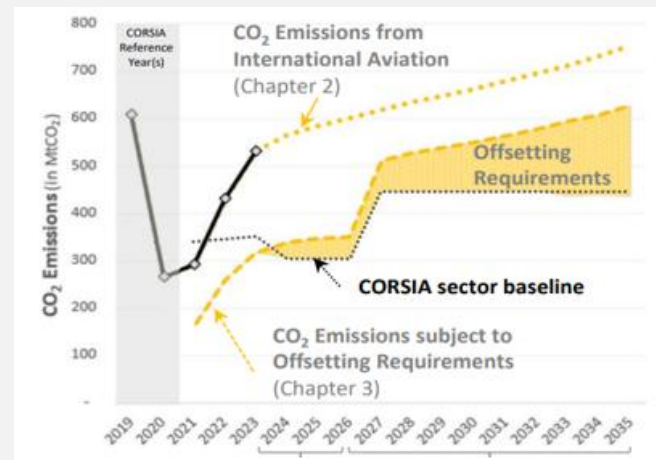
Article 6

- **78% of Paris Agreement Parties** have signalled their intention to use Article 6 mechanism.
- Countries planning to purchase ITMOs represent a **market potential of 0.18 – 1.5 GTCO₂e by 2030**.
- With the ambition cycle requiring updated NDCs every 5 years, **the NDC compliance market is expected to expand progressively over time**.

CORSIA

- Over the period 2024-2035, an **estimated 0.98 to 1.5 GCO₂ of credits will be required** to meet airlines' offsetting obligations.

Mid traffic scenario

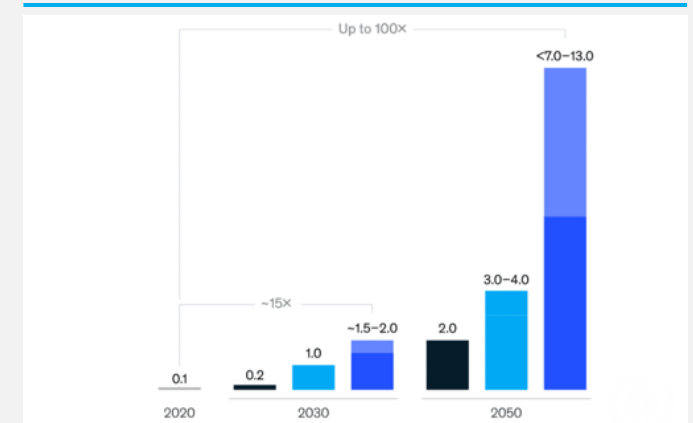


ICAO, (2025), Interim Assessments

Voluntary Markets

- The market is projected to grow from **USD 1.4 billion in 2024** to **USD 5-50 billion by 2030**, with global demand for carbon credits rising to 7-13 GTCO₂e annually.

Voluntary demand scenarios for carbon credits, gigatons per year.



McKinsey & Company

Corresponding adjustments have a price premium



Effect of letters of authorization on carbon credit prices

**CORSIA-Eligible Forestry Credits
(Guyana ART-TREES 102)**

\$22.50/tonne with LoA
(Quantum Commodity Intelligence)

~80% increase post-LoA
(AlliedOffsets)

**Gold Standard Projects –
Clean Cookstoves**

\$2-\$4/tonne without LoA

>\$10/tonne with LoA
(Quantum Commodity Intelligence)

**Gold Standard Projects –
Water Filtration**

Up to \$7/tonne without LoA

>\$10.60/tonne with LoA
(Quantum Commodity Intelligence)

Voluntary Carbon markets: a reset in motion



Supply is tightening while demand remains stable



Corporates have not abandoned the VCM



The market is undergoing a quality reset, not a collapse

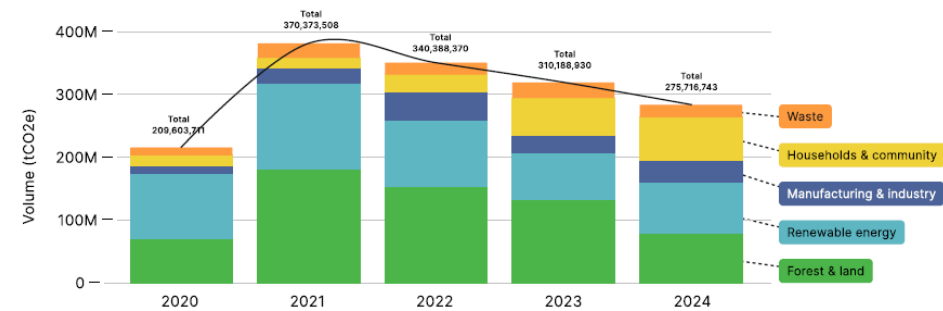


Nature-based solutions remain central

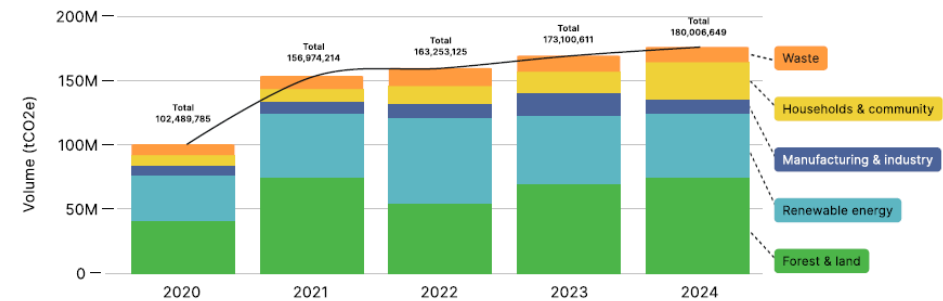


The VCM is rebalancing toward better alignment with integrity frameworks

Historical annual VCM issuance



Historical annual VCM retirements



Source: Calyx Global (2025)

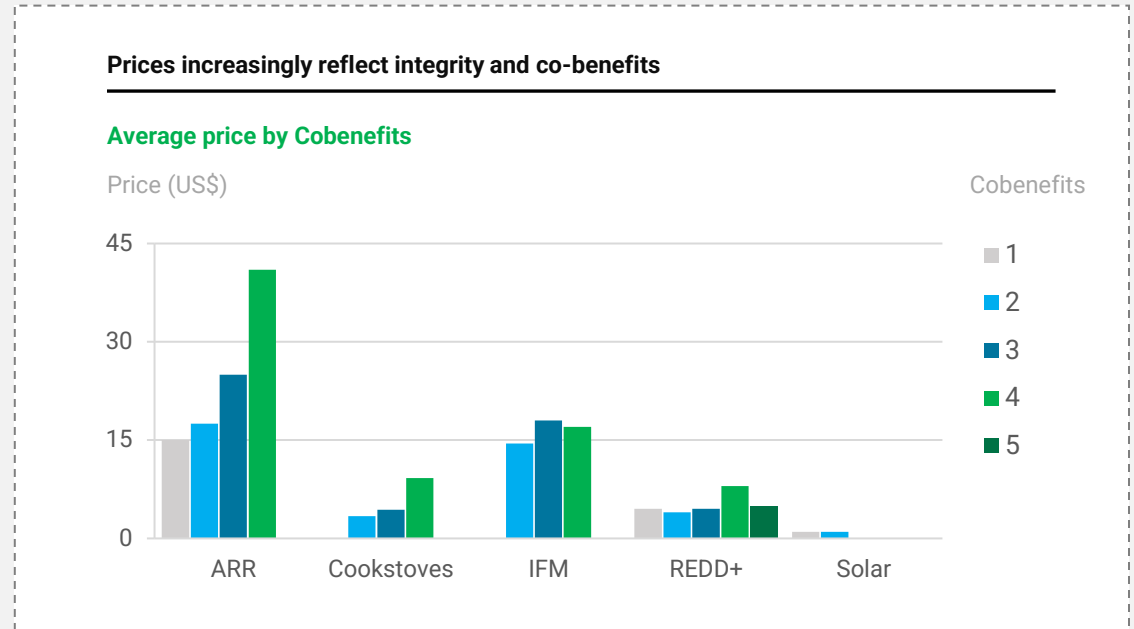
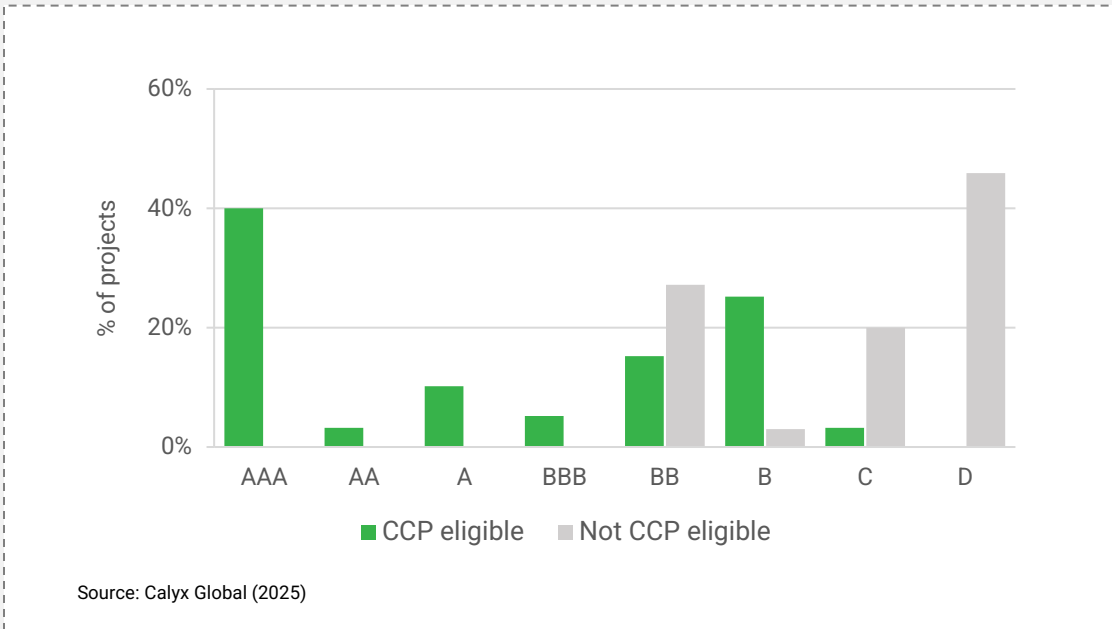
Market dynamics are shifting towards quality



Strong buyer preference for high-quality credits (CCP-labeled), which now command price premia of up to 25% (ClearBlue Markets & Calyx Global)



Demand for high-quality drives a “virtuous cycle”, pushing developers to update methodologies and meet higher integrity standards.



Supply side converge is key



Article 6	ICVCM / VCM	CORSIA
UNFCCC Parties	ICVCM Board	ICAO Council
Environmental Integrity Guidance	Core Carbon Principles (CCPs)	Emissions Unit Eligibility Criteria
6.4 RMPs	Assessment Framework	Program Design + Integrity Criteria
A6.4 Mechanism; A6.2 frameworks	CCP-Eligible Programs	Approved Emissions Unit Programs
A6.4 approved methodologies	CCP-Approved Methodologies	CORSIA-eligible methodologies
ITMOs; A6.4ERs	CCP-labelled credits	Eligible Emissions Units

Demand side convergence - regulating green claims



1

International non-profit organization

Voluntary Carbon Markets Integrity Initiative (VCMI)

The VCMI [Claims Code of Practice](#) provides guidance on how companies can make voluntary use of carbon credits and carbon integrity claims

Science Based Targets initiative

The SBTi develops standards, tools and guidance which allow companies to set greenhouse gas emissions reductions targets in line with what is needed to reach net-zero by 2050 at latest.

2

Supranational Directive

European Union Green Claims Directive (2023)

European Union Green Claims Directive is aimed at stopping companies from making misleading claims about environmental merits of their products and services.

3

National Initiative

Australian Competition and Consumer Commission guidance

'Making Environmental Claims' guidance explains businesses' obligations under Australian Consumer Law for environmental and sustainability claims. It sets out what the ACCC considers to be misleading conduct and good practice when making such claims.

4

Subnational Regulation

California Bill AB 1305

This bill requires sellers of voluntary carbon offsets and buyers of voluntary carbon offsets that make green claims to disclose specific information on their website. Besides, the bill imposes civil penalties for each violation.

UNEP's work on carbon markets



Support to Implementation of Article 6

- USD 20 million for capacity building tools, implementation preparedness, and pilot projects.
- First Article 6 Pilot Projects underway in Africa and Asia.
- Leading the Sustainable Development Initiative (SDI) for implementation of the mandatory SD tool under Art.6.4.
- Article 6 pipeline launched (<https://unepccc.org/article-6-pipeline/>)



Increasing the Integrity of the Voluntary Carbon Market

- Support countries in the application of best standards by credit categories
- Participation of high-integrity credits in domestic and international VCM transactions
- Participation of high-integrity credits in domestic carbon trading schemes



Operationalizing UN carbon market principles

- Supporting UN SG's **internal task force** on carbon markets with high social and environmental integrity.

Panel: Current status and trends in carbon markets



Moderator

Panelists



Gabriel Labbate

Head of the Climate Mitigation Unit and Global Team Leader of the UN-REDD Programme, UNEP



Andrea Abrahams

Managing Director VCM | IETA



Chinga Mazhetese

Regional Officer | ICAO



Cristina Fróes de Borja Reis

Extraordinary Secretary for Carbon Market | Ministry of Finance, Brazil



Olufunso Somorin

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Coffee break

Global Article 6 Pipeline



**Karen
Olsen**

Senior Advisor, UNEP CCC

A6 Pipeline background and history



The UNEP Copenhagen Climate Centre (formerly UNEP DTU Partnership and UNEP Risø Centre) set up and refined the CDM Pipeline database since 2002



In 2023, UNEP-CCC transitioned the CDM Pipeline to the Article 6 Pipeline and compiled data and information on new Article 6 activities in an Excel database



As the rules and activities develop, the data is updated monthly and visualized on the UNEP-CCC website



The A6 Pipeline is now being transformed into an interactive and user-friendly web-based platform



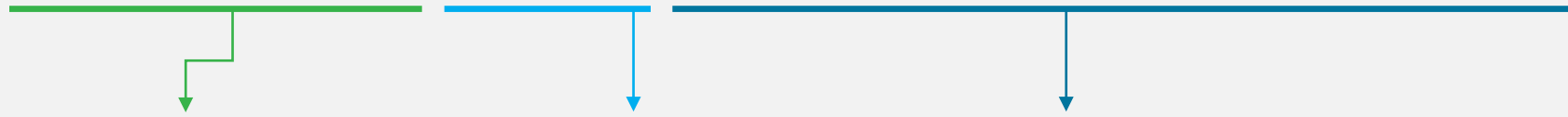
The aim is to provide insights on the development of Article 6 activities and their impacts on countries' national climate targets (NDCs) and SDG achievement at the national and global level

Goal



What does the A6 Pipeline aim to achieve and how?

Promote Ambition, Integrity, and Sustainable Development in Article 6



1.5°C

consistent accounting

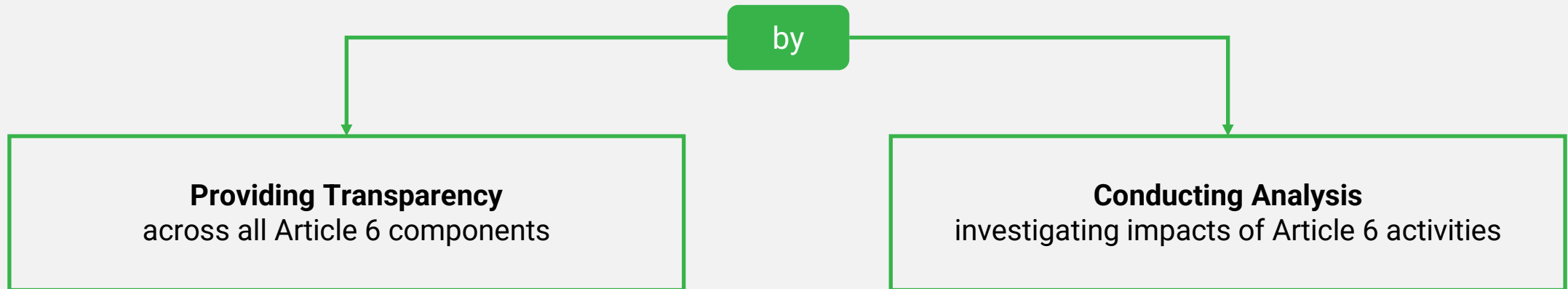
co-benefits & no harm

Goal



What does the A6 Pipeline aim to achieve and how?

Promote Ambition, Integrity, and Sustainable Development in Article 6



The A6 Pipeline is an **open-source database** providing information and analysis based on a variety of sources - **mostly from the UNFCCC and UNEP-CCC's own research**, but also integrating data from initiatives like **Climate Watch and the Net Zero Tracker**

Structure and Content



Global Data

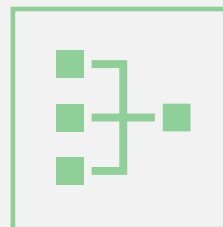
- Overviews clustered by countries, regions or other country groups (e.g. high income or LDCs)
- Detailed country and region pages linking Article 6 to national targets and priorities (e.g. NDCs and SDGs)



Activities

coming soon

- Individual projects and programmes (e.g. details from the PDDs)
- Activities and their impacts across sectors, types, GHGs, methodologies, and more (e.g. projects for agriculture, solar cookstoves or methane abatement)



Cooperation

coming soon

- Tracing Article 6.2 and PACM activities throughout the activity cycles (e.g. SD Tool report, authorization, or issuances)
- Transactions and ultimate use of the units generated under each of the mechanisms (e.g. ITMOs, MCUs or Overall mitigation)



Analysis Hub

coming soon

- Analytical deep dives and explainers (e.g. climate impact from the CDM transition)
- Option to flexibly interact with the data to generate and download your own reports (various graphs and tables with filter options)

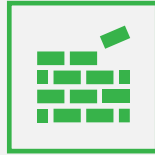


Global Data

Structure and Content



- Overviews clustered by countries, regions or other country groups
- Detailed country and region pages linking Article 6 to national targets and priorities



Views:

- Individual countries
- Various regions and subregions
- Other groups, e.g. high-income countries or LDCs



Data points:

- **Article 6.2:** Agreements between countries, cooperative approaches and associated activities and mitigation outcomes
- **Article 6.4:** Activities and planned mitigation at different process stages, Sustainable Development impacts (SD Tool)



Filtering:

- Additionally filter activities by stages of Article 6.2 or 6.4 cooperation, or the type of projects



Country level details:

- National targets, sustainable development goals, capacity building initiatives and more



Global Data

Structure and Content



Home → Global Data

Global Data

Article 6 cooperation across all countries that are a Party to the Paris Agreement.

Last updated 4 December 2025

Search

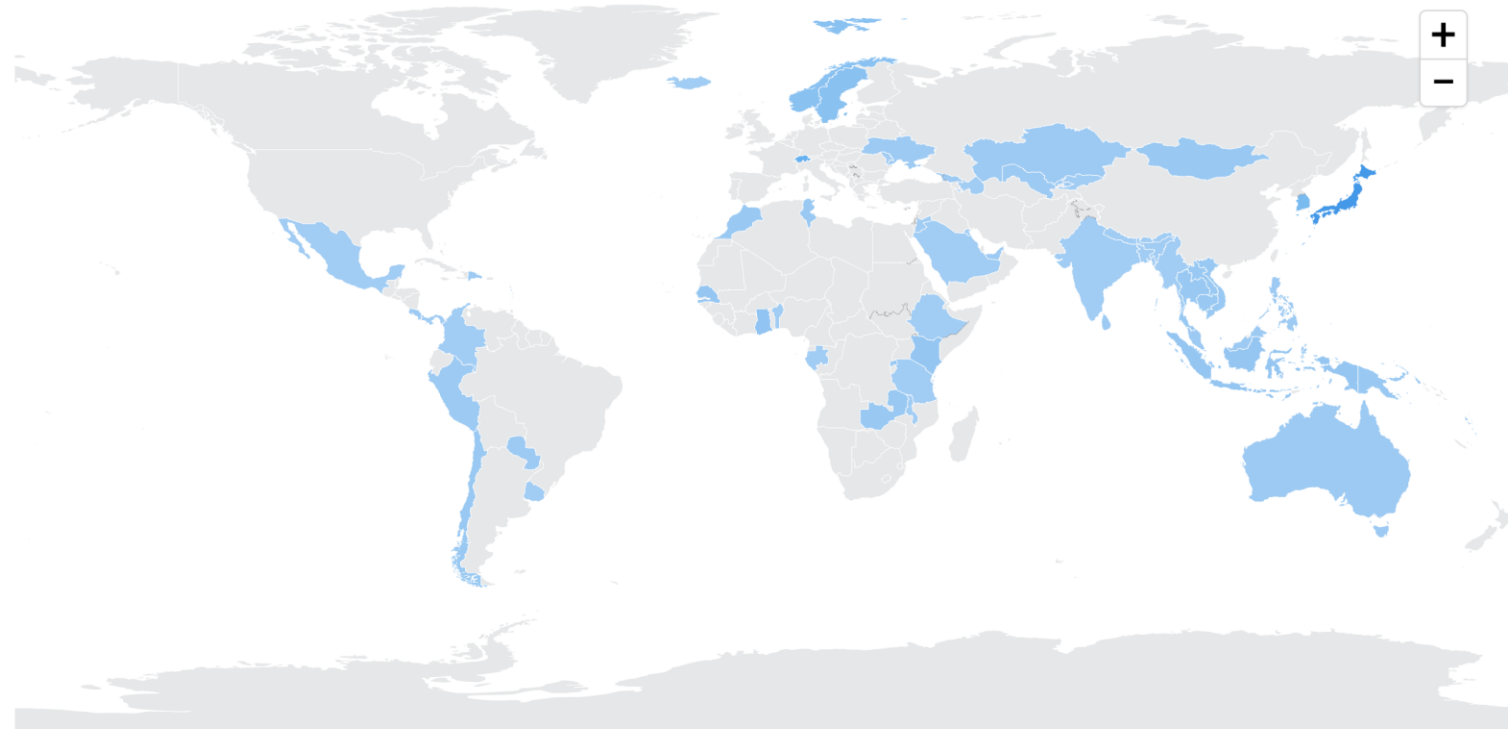
🔍 Countries, regions and socioeconomics...

VIEW BY Countries Regions
Socioeconomics

Countries with:

- Bilateral agreements 62 / 198
View list ▾
- Transferred or received ITMOs 4 / 198
View list ▾
- Approved PACM activities 16 / 198
View list ▾

0 1 31 Bilateral agreements per country





Activities

Structure and Content



- Individual projects and programmes
- Activities and their impacts across sectors, types, GHGs, methodologies, and more

A structure to **classify types of activities** was developed for an **easier integration into sectoral decarbonization plans** - harmonized across Article 6.4 and 6.2 activities.

The list of activity types and subtypes was developed after consulting **existing taxonomies**

UNFCCC Common Nomenclatures

IPCC Mitigation Options

Berkeley Voluntary Registry Offsets Database

...



30+ **Activity types** across sectors – these activity types each have several subtypes

150+ **Activity subtypes** – each having a corresponding activity type, category, sector, and GHG



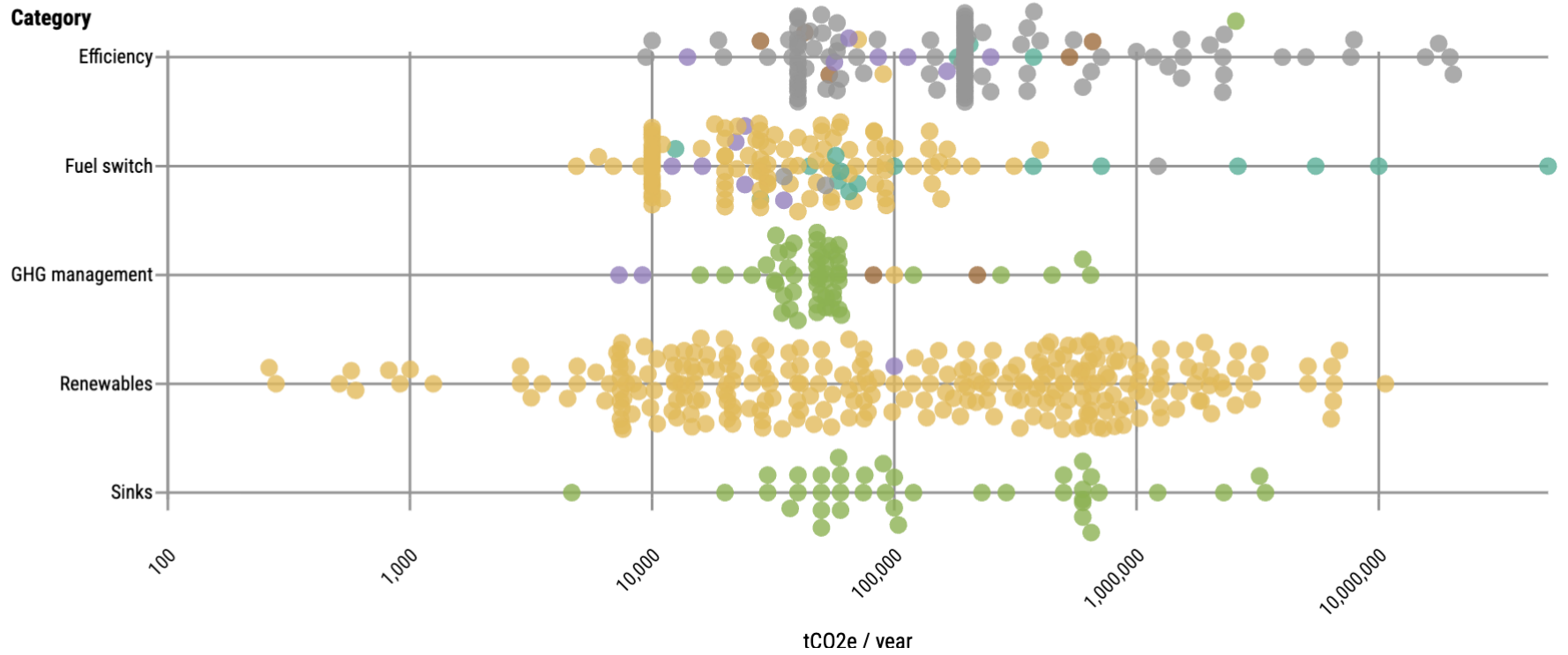
The structure **integrates multiple dimensions** and helps understand which emissions (e.g. CO₂ in manufacturing) are tackled and how (e.g. fuel switch)



INDIVIDUAL ACTIVITIES

All activities by project category and expected annual mitigation.

VIEW BY Preview Table FILTER BY Activity type GHG Reductions/Removals Year Search





Cooperation

Structure and Content



- Tracing Article 6.2 and PACM activities throughout the activity cycles
- Transactions and ultimate use of the units generated under each cooperation modality

The Cooperation section will consist of:

- **Overview across all market-based Article 6 activities**, shedding light on the overall and relative impact by combining A6.2 and PACM data
- **Two deep dives for A6.2 and PACM respectively**, including procedures as well as country- and activity-level data for each of the pathways of cooperation



Charts with Article 6.2 and PACM data providing a comprehensive overview of all Article 6 activities and illustrating the relationship between Article 6.2 and 6.4 – can be viewed both globally or with regional or sectoral filters



A6.2 | Cooperative approaches

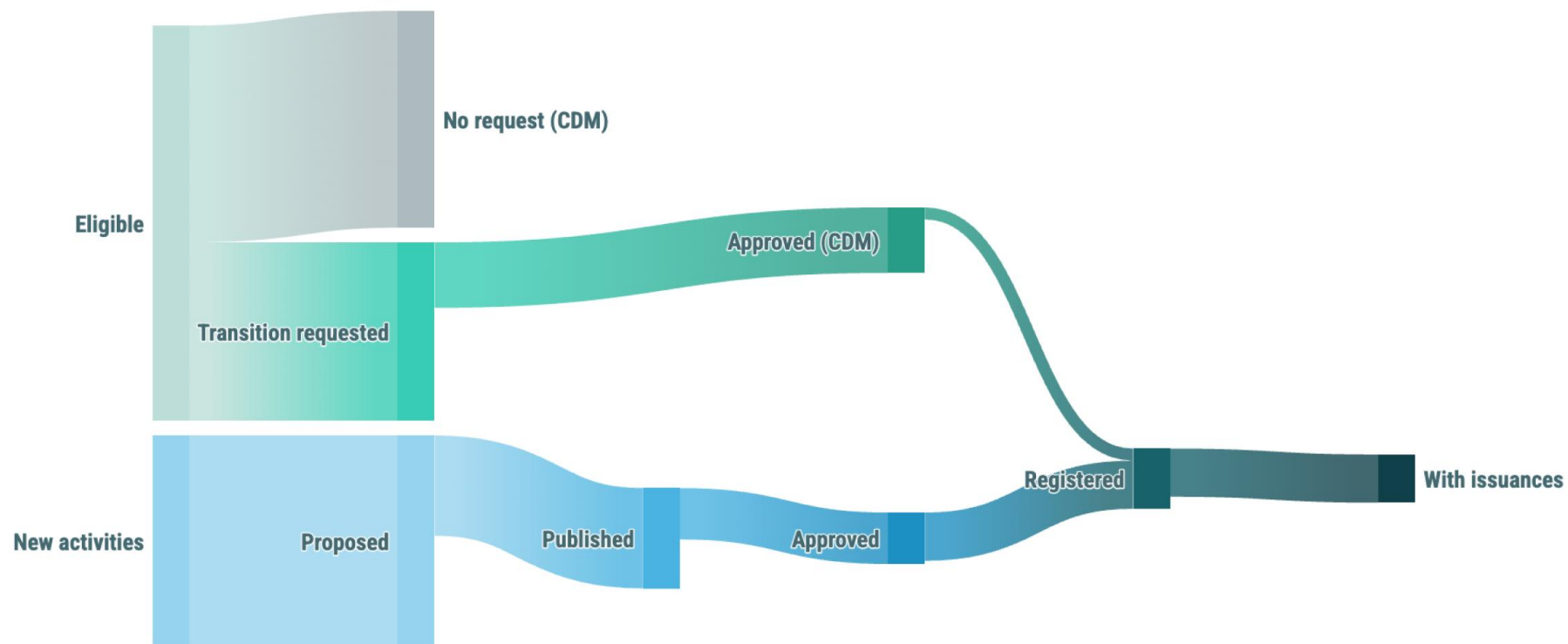
- Tracking cooperation under Article 6.2 from MoUs to bilateral agreements and cooperative approaches - from pilot projects to authorized and transferred mitigation outcomes

A6.4 | Paris Agreement Crediting Mechanism

- Tracking activities at the various stages of the project pipeline and providing insights on national arrangements and wider implications like sustainable development impacts

PIPELINE OF POTENTIAL PACM ACTIVITIES

Tracing the number of activities across different process stages



Illustrative example simulating the entire activity cycle - to date there are no newly proposed activities with published design documents nor any A6.4ER issuances.



Analysis Hub

Structure and Content



- Analytical deep dives and explainers
- Option to flexibly interact with the data to generate and download your own reports

Data Explorer: this interactive section will allow A6 Pipeline users to build customized visualizations and export the data in a way that best suits their needs



Article 6.2 Cooperation:

- Customizable chart to highlight the cooperation between countries and regions as well as the flow of mitigation outcomes
- **Example questions:** *How many cooperative approaches are LDCs engaged in and who are the partners? What are the expected mitigation of activities supported by European high-income countries?*



Individual Activities:

- Detailed information on projects and programmes with sophisticated filter options for different types of activities - displayed as graph or table
- **Example questions:** *How many landfill gas projects are planned in South America, what is their expected GHG impact and where do I find the documents?*



Country Overview:

- Compare different countries in an overview table with the option to add columns from a comprehensive list of indicators



Map:

- Visualize any indicator in a customized map to easily illustrate regional differences and specificities



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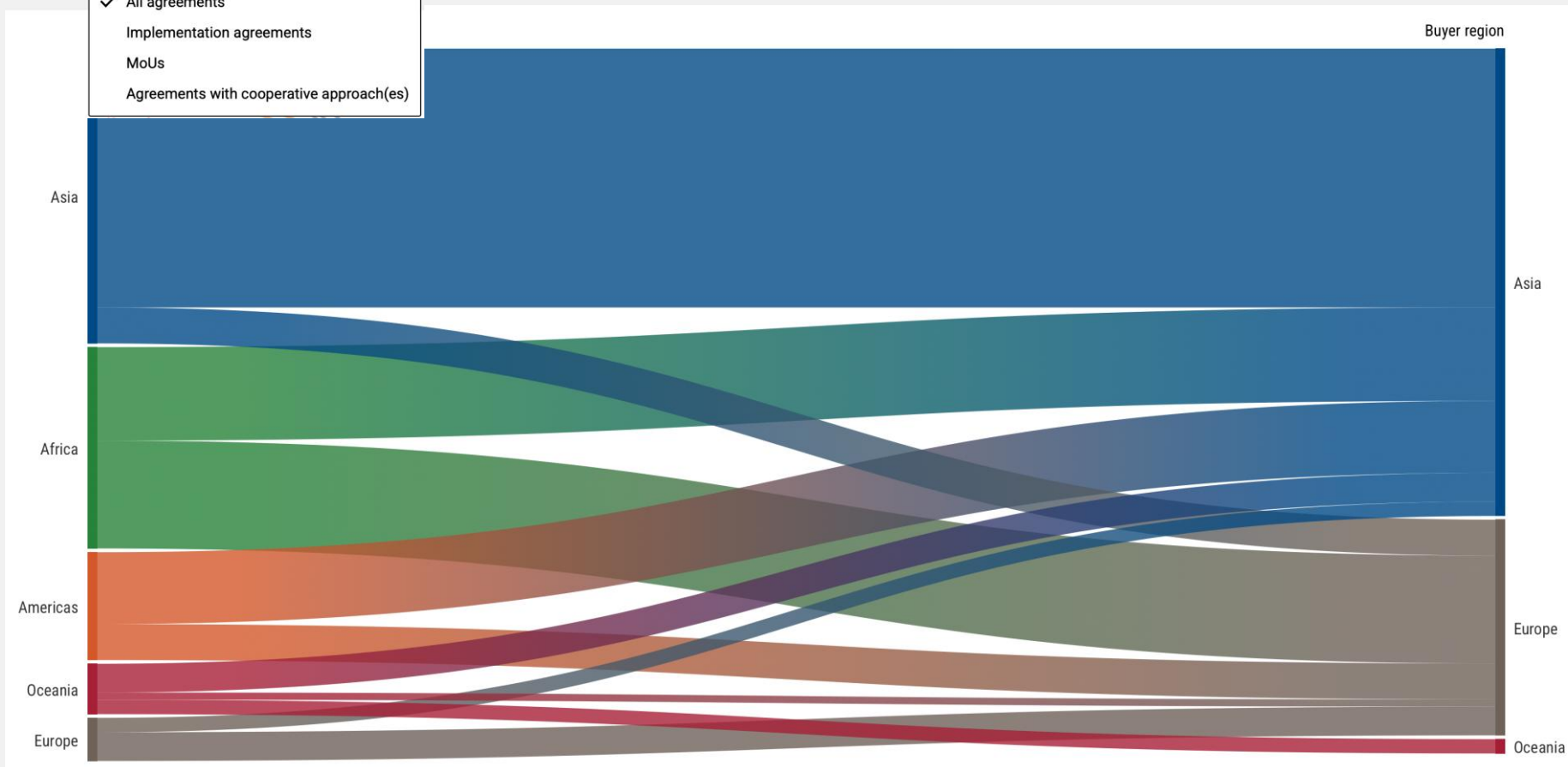


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BILATERAL AGREEMENTS - REGION TO REGION

FILTER BY All agreements ▾

- All agreements
- Implementation agreements
- MoUs
- Agreements with cooperative approach(es)



the flow

ent



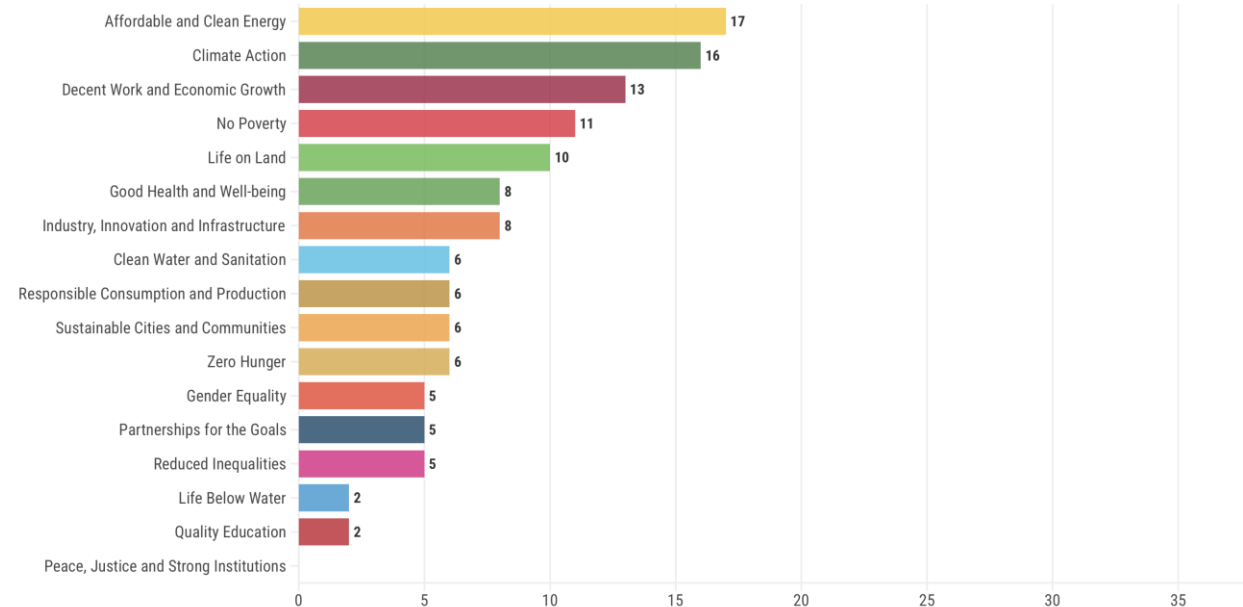
Sustainable Development



- Country priorities and intended contributions to sustainable development
- SDG impacts and risk assessment (A6.4 SD Tool)

Explicit References to SDGs in Participation Requirements

Number of countries that referred to the SDG | Total submissions: 38



Which Sustainable Development contributions do Parties expect from the participation under the PACM?



Sustainable Development



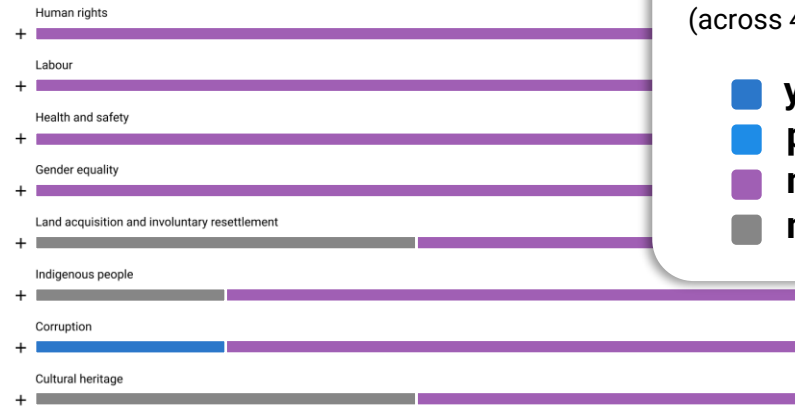
- Country priorities and intended contributions to sustainable development
- SDG impacts and risk assessment (A6.4 SD Tool)

IDENTIFIED RISKS

ENVIRONMENTAL



SOCIAL



Identified Risk
(across 4 projects and programmes)

- yes (1x)**
- potentially (0x)**
- no (37x)**
- n/a (6x)**



First results from applying the Article 6.4 Sustainable Development Tool (for activities transitioning from CDM)

Further resources and A6 Pipeline development



[SPAR6C Guides](#)

Guide 1 Promoting ambition and transformational change using Article 6

Guide 2 Developing an Article 6 **host party strategy**

Guide 3 Developing an Article 6 **host party institutional framework**

Guide 4 Using Article 6 with carbon **pricing instruments**: three key policy issues for host parties

Guide 5 **Screening and developing** Article 6 activities

Guide 6 **Financing and contracting** Article 6 activities - *coming soon*



[IAA6](#)

The project adopts **South-South cooperation** for the iterative co-development of an **integrated assessment approach to Article 6** (the [IAA6 Approach](#)) to enable evidence-based policy making and **implementation of Article 6 carbon markets** in Peru, Sri Lanka and Tanzania



[SDI](#)

Based on technical work, research and analysis, the SDI regularly presents options for **guidance, rules, modalities and procedures** to operationalize the **Article 6 sustainable development (SD) provisions**

Thank you!

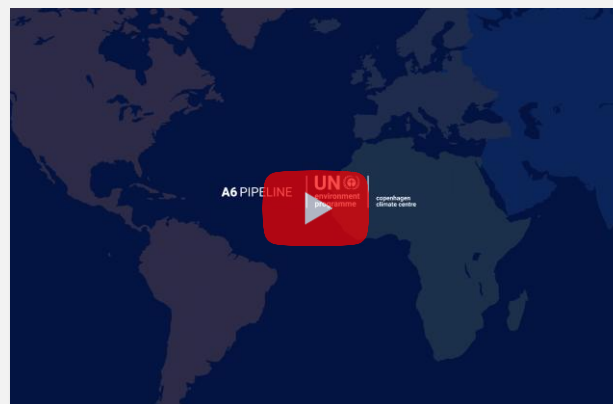
Get in touch with any questions or suggestions!



Sign up for updates



Preview



 <https://www.youtube.com/watch?v=cA92XDjfwPY>

Current Pipeline



 unepccc.org/article-6-pipeline/



Market dynamics and finance mobilization



Scene setter



**Fundile
Maphanga**

Policy Lead,
AlliedOffsets

The State of the Voluntary Carbon Market: Integrity, Capital & Future Opportunities

Fundile Maphanga - Policy Lead (AlliedOffsets)
10th December, 2025

Panel: Market dynamics and finance mobilization



Moderator

Panelists



**Micaela
Passetti**

Carbon Markets Specialist,
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**Andrew
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Emsurge



**Luke
Cillie**

Senior Consultant,
EY's Global Center for
Climate policy



**Omon
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Southern Africa and the
Arab States Region,
the United Nations Capital
Development Fund



**Roselyn
Adjei**

Senior Advisor Consultant,
Environmental Defense Fund

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Closing remarks



**Mirey
Atallah**

Chief of the Adaptation and
Resilience Branch, Climate
Change Division, UNEP



Thank you



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