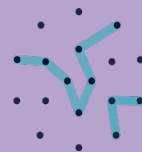


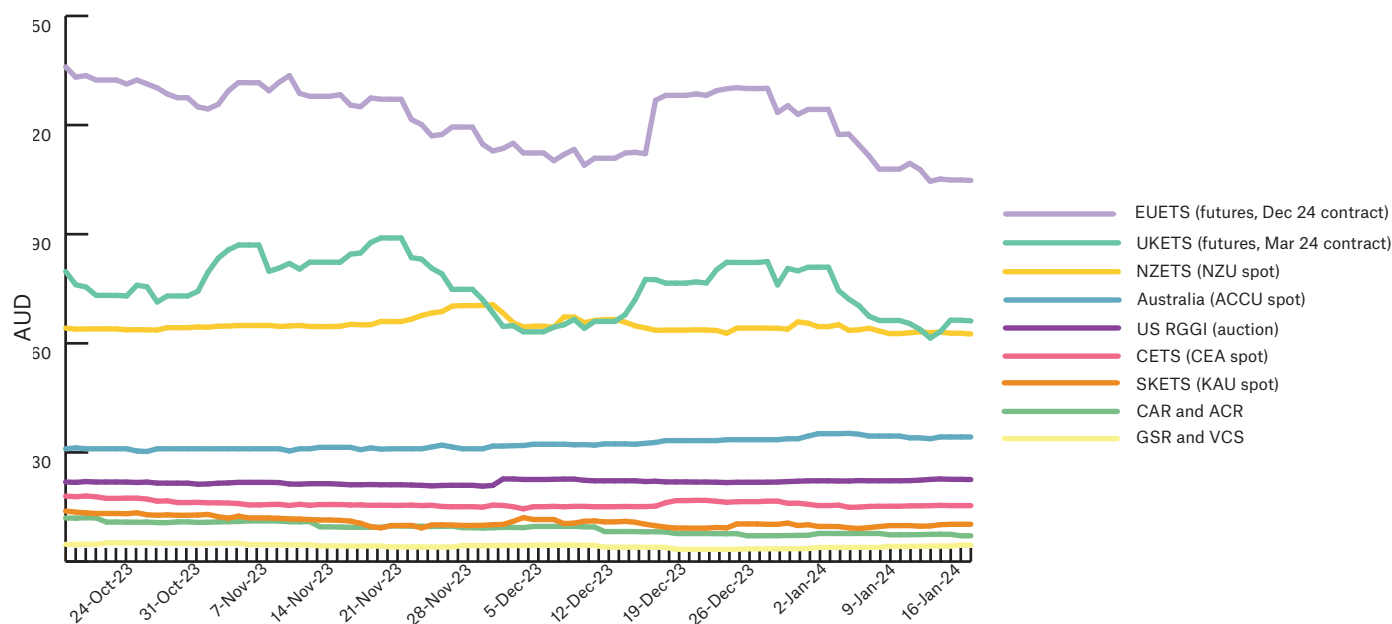


International Carbon Market Update market brief

February 2024

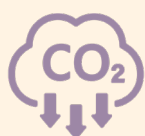


Global Carbon Prices



Sources: Sandbag, CarbonCredits.com, ICE, RGGI, AlliedOffsets.

Policy & Market Tracker



73 national and subnational carbon pricing mechanisms implemented.¹



USD1.87 Billion. Value of the voluntary carbon market in 2022.²



23% of global GHG covered by carbon prices.¹



78 bilateral agreements signed by countries under Article 6.2.³



USD100 Billion raised through carbon pricing mechanisms in 2022.¹

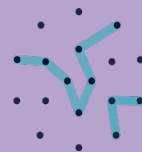


1,916 ITMOS traded under Article 6.2.³

¹ World Bank

² Ecosystem Marketplace

³ UNEP-CCC



COP28 Policy Outcomes

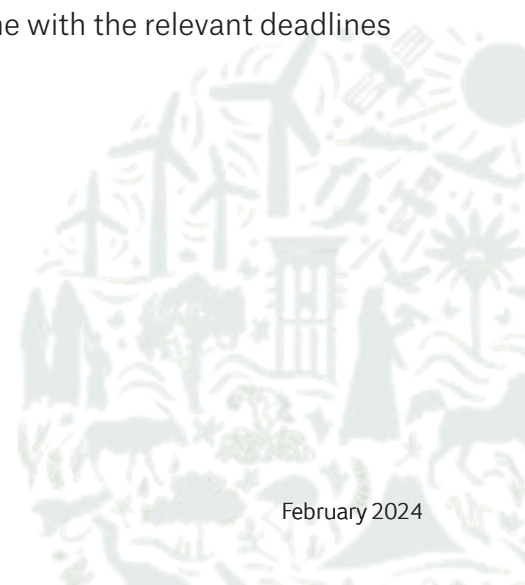
COP28 concluded on 13 December 2023 with key outcomes including:

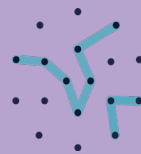
Global stocktake: Current NDCs are projected to result in a temperature increase of 2.1-2.8°C. As a result, the first global stocktake included calls for transitioning away from fossil fuels in energy systems, tripling renewables and doubling the rate of energy efficiency improvement by 2030, phasing out of inefficient fossil fuel subsidies, and accelerating zero and low carbon technologies.

Climate finance: The Loss and Damage Fund was operationalised with initial contributions of USD 792 million, while the Green Climate Fund and the Adaptation Fund received pledges totalling USD 12.8 billion and USD 188 million, respectively. However, these commitments still fall short of the trillions needed by developing countries to meet the mitigation and adaptation goals of the Paris Agreement.

Carbon markets: No decision texts were reached regarding Article 6 market mechanisms. For Article 6.2, unresolved issues encompass the definition of 'cooperative approaches', the timing and types of host country authorisations, sequencing and regulations for reporting and review, and the structure of an international registry. For Article 6.4, outstanding issues in operationalising the UN-backed centralised crediting mechanism include guidance on methodology requirements and removal activities, as well as procedures and tools on baselines, additionality, leakage, reversal risks, and grievance appeals.

Despite the failure to reach agreement on Article 6 at COP28, **the Article 6.4 Supervisory Body (SB)** will continue the relevant work to operationalise the mechanism in 2024. To facilitate this, guidelines on pre-registering Article 6.4 projects have been published on the [SB's website](#). For a host Party to participate in the Article 6.4 mechanism, it is required to meet all the requirements outlined in Section 4 of the [Article 6.4 project activity cycle procedure](#) and submit a completed [form](#) to the UNFCCC Secretariat through a Designated National Authority (DNA). Meanwhile, activity participants of a proposed Article 6.4 project must demonstrate that 'consideration has been given to the Article 6.4 mechanism benefits in the decision to implement the project' by submitting [a prior consideration notification form](#) to the Secretariat in line with the relevant deadlines set out in the [Article 6.4 activity cycle procedures for projects](#).



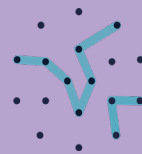


Global Climate Policy Update

In Europe:

The European Parliament adopted the first draft legislation for the EU Carbon Removal Certification Framework (CRCF). The framework provides a voluntary certification scheme for carbon removals generated in Europe. The CRCF defines criteria for 'high quality carbon removals' and classifies them into three categories: nature-based solutions, technology-based solutions (e.g. bioenergy with carbon capture and storage (BECCS) or direct air carbon capture (DACCs)), and carbon storage in products (e.g. wood-based construction materials). Notably, the framework excludes the capture of fossil carbon for storage (CCS) or utilisation (CCU). Trilogues involving the European Council and the European Commission are anticipated to conclude with an agreement by March 2024.

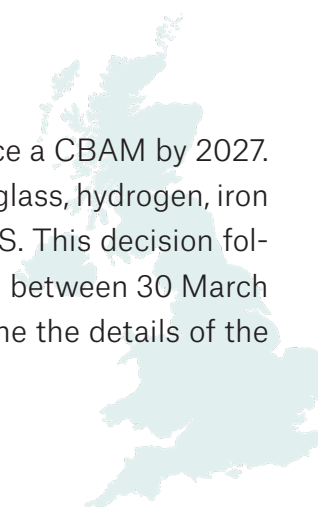
Sweden and Switzerland signed a declaration of intent to pilot removal activities under Article 6.2. Both countries are currently advancing negative emissions technologies such as BECCS. The preliminary agreement will make them pioneers in experimenting with a cooperative approach to these technologies. It is significant as international rules regarding removal activities faced a deadlock at COP28 and will undergo further negotiations at COP29 in Baku, Azerbaijan. The cooperation is expected to provide on-ground implementation experience to shape the UN recommendations on the new technologies.



Türkiye plans to launch its emissions trading scheme (ETS) in 2025, initially focusing on high-emitting sectors such as iron and steel, aluminium, cement, paper, chemicals, and power generation. The scheme is a response to the EU's Carbon Border Adjustment Mechanism (CBAM) and will function as a cap-and-trade system. The ETS is expected to be integrated into Turkey's forthcoming Climate Change Law. Turkey has received support from the World Bank's Partnership for Market Implementation (PMI) program following the completion of the readiness phase.

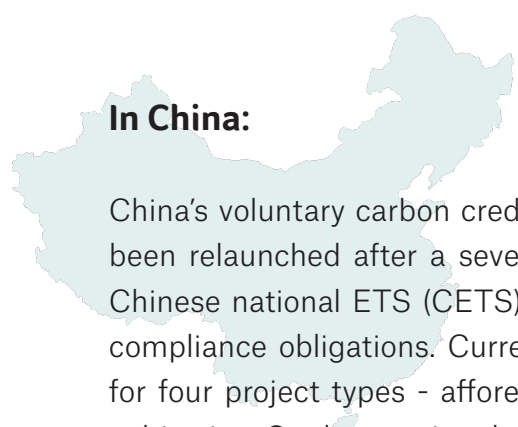
In the UK:

On 18 December 2023, **the UK Government** announced its intent to introduce a CBAM by 2027. Imported goods from sectors such as aluminium, cement, ceramics, fertiliser, glass, hydrogen, iron and steel will incur a charge equivalent to the carbon price set by the UK ETS. This decision follows a public consultation on measures to address carbon leakage conducted between 30 March 2023 and 22 June 2023. Further consultations will be conducted to determine the details of the scheme.

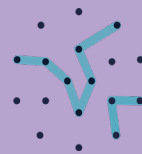


In China:

China's voluntary carbon crediting scheme, **China Certified Emissions Reduction (CCER)**, has been relaunched after a seven-year suspension since 2017. This scheme will complement the Chinese national ETS (CETS) by allowing regulated entities to use CCERs against 5% of their compliance obligations. Currently, participation is restricted to local companies, with eligibility for four project types - afforestation, solar thermal power, offshore wind power, and mangrove cultivation. On the opening day, the volume of CCERs traded reached 375,315 million tonnes at an average price of USD 8.85 per tonne. According to a research report by Minsheng Securities, the spot market could reach a value of USD 20 billion in 2025, driven by the expansion of the CETS.



China's State Council has approved an interim regulation overseeing the national ETS. This regulation holds a higher legal standing compared to the preceding ministerial-level management rules and provides clarity on certain issues identified during the two years operation of the national ETS. It specifically addresses the property attributes of carbon rights and introduces unified provisions governing scheme coverage, quota allocation, data management, trading operations, non-compliant penalties.



In the Asia Pacific:

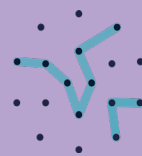
In Australia, the Clean Energy Regulator (CER) has engaged the services of Trovio Group, a technology solutions firm, to develop a unit and certificate register. This is taking place in conjunction with the joint establishment of a national carbon exchange with the Australian Securities Exchange (ASX). The register is designed for Australian carbon credit units (ACCUs) and will expand to encompass certificates such as large-scale generation certificates (LGCs). Market stakeholders will be consulted to explore trading options, and the anticipated launch of the new register is set for the second half of 2024.

Thailand and Switzerland concluded the inaugural trading of Internationally Transferred Mitigation Outcomes (ITMOs) under Article 6.2 of the Paris Agreement. This required the authorisation of the mitigation activity (the Bangkok E-Bus Program) by both countries in February 2023, involving independent monitoring and verification, and an agreement by Thailand to make corresponding adjustments to its national emissions account. Once completed, 1,916 ITMOs were transferred to the Swiss Emissions Trading Registry in December 2023, contributing to Switzerland's NDC.

Taiwan initiated the trading of international carbon credits from seven countries in Asia, Africa and South America on the Taiwan Carbon Solution Exchange (TCX), established in August 2023. On the first day of trading, 45 participating companies from key industries such as semiconductors, electronics, finance and steel transacted a total of 88,250 credits at prices ranging between USD 3.50 and USD 12 per unit. Meanwhile, the Taiwanese government is also in the process of drafting a carbon tax regulation that will affect heavy emitters starting in 2025.

New Zealand has published an updated emissions forecast on its greenhouse gas emissions until 2050, suggesting that ITMOs may be required to meet the country's NDC targets. The forecast indicates a potential overshoot ranging from 40 to 81 million tonnes, with estimated costs between NZD 3 billion and NZD 23 billion. The minor Party in the New Zealand government coalition, ACT, has initiated a public consultation on a draft offshore mitigation bill. This proposal seeks to amend the Climate Change Response Act 2002, allowing New Zealand's emissions targets to be achieved through a combination of domestic and international mitigation activities.

Japan's Tokyo Stock Exchange (TSE) has initiated a Trial Market Maker Scheme, running from 27 November 2023 to 29 February 2024, aimed at enhancing the liquidity of J-Credits. Companies including Sumitomo Corporation, Mitsui & Co, and Mizuho Bank are designated as market makers to stimulate transactions in the carbon credit market launched in October 2023 on TSE. As of 24 November 2023, the traded volume of J-credits amounted to 2,500 million tonnes, considerably lower than the trade volumes of China emission allowances (CEAs) and Korean Allow-



ance Units (KAUs), which totalled 1.45 million tonnes and 122,607 million tonnes, respectively.

From 1 January 2024, **carbon tax-liable companies in Singapore** are permitted to use international carbon credits (ICC) to account for 5% of their taxable emissions. The current eligible ICC list only includes projects implemented in Papua New Guinea certified by the Gold Standard for the Global Goals (GS4GG), Verified Carbon Standard (VCS), American Carbon Registry (ACR), and Global Carbon Council (GCC). In accordance with Singapore's Carbon Pricing (Amendment) Act 2022, the carbon tax rate will increase from SGD 5 per tonne to SGD 25 per tonne in 2024 and 2025, and SGD 45 per tonne in 2026 onwards.

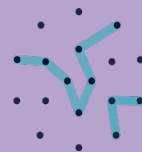
In the Americas:

The Canadian Government has released a draft regulatory framework for a cap-and-trade system within the oil and gas industry. To curb greenhouse gas emissions from the nation's largest emitting sector, an emissions cap ranging from 106 to 112 million tonnes per year (equivalent to 35-38% below 2019 emission levels) is proposed to be phased-in between 2026 and 2030. Liable entities will be allowed to use allocated allowances, domestic carbon credits, and contributions to a decarbonisation fund to meet their compliance obligations under this framework.

Brazil's Chamber of Deputies (the Lower House) has endorsed a cap-and-trade bill with the goal of establishing Latin America's largest carbon market. The bill proposes to impose compliance obligations on entities emitting more than 25,000 tonnes of carbon equivalent per year. However, exemptions will be granted to the agricultural sector, which constitutes a quarter of the forest state's carbon emissions. The bill is currently pending further consideration in the Senate, where amendments suggested by the Lower House are under review.

Argentina's new federal government is considering the implementation of an ETS through an omnibus reform bill presented to its National Congress. The extensive reform package, containing 644 articles, includes the establishment of a carbon market in alignment with the country's 2030 NDC target. This aim is to limit net emissions below 349 million tonnes in 2030, albeit still 16% above the 2010 baseline. This proposed provision is part of a comprehensive set of market-based measures aimed at addressing the country's economic crisis.

Sources: Carbon Pulse, Bloomberg, S&P Global, UNFCCC, Reuters.



Market Commentary

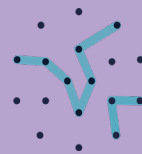
Unpacking the Outcomes of Article 6 Market Negotiations at COP28

The first global stocktake (GST) of the Paris Agreement presented to COP28 underscores a stark reality: the global community needs to rapidly reduce GHG emissions by 43% relative to 2019 levels by 2030 to limit global warming within 1.5°C. However, the collective efforts reflected in the current NDCs project only a 5.3% reduction.

Bridging this large ambition gap requires countries to speed up domestic mitigation actions, as well as advancing international cooperation to address the shortfalls in climate finance, technology, and capacity-building support for developing countries, as highlighted in Paragraph 31 of the GST.

Article 6 of the Paris Agreement provides three avenues for fostering crucial partnerships to boost climate investments:

- o Article 6.2 is a decentralised system that allows countries to exchange mitigation outcomes (internationally transferred mitigation outcomes, or ITMOs) should one country surpass its NDC targets while another falls short.
- o Article 6.4 establishes a centralised market system with an international crediting mechanism governed by the UNFCCC through a supervisory body. This mechanism will essentially replace the Clean Development Mechanism operated under the Kyoto Protocol.
- o Article 6.8 provides opportunities for countries to cooperate on non-market approaches (NMAs) through mitigation, adaptation, finance, technology transfer and capacity building.



What is pending in Article 6 market negotiations?

The Article 6 rulebook was agreed at COP26. However, the operational aspects of its technical elements (supervisory body (SB) and subsidiary body for scientific and technological advice (SBSTA) works) were pushed to negotiations at COP27 and COP28 and will continue throughout 2024.

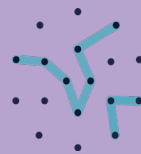
For Article 6.2, several outstanding issues were designated for resolution at COP28 but the Parties failed to reach a consensus by its conclusion. These include considerations related to the timing and scope of authorisations, the formulation of detailed rules and templates for accounting and reporting, and the development of necessary infrastructure. The potential for host countries to revoke authorisations on credits (or a proportion of credits) was particularly controversial, raising the integrity risk of double-counting. The final draft text also failed to impose detailed reporting requirements clouding transparency, specifically how much countries would be required to report on existing and future trades, or how much they could deem 'confidential', with further disagreements emerging around the definition of 'cooperative approaches'.

Regarding Article 6.4, the supervisory body was mandated to develop recommendations on methodology requirements and removal activities. Unfortunately, agreement on these issues critical to operationalising the centralised mechanism could not be achieved at COP27 and COP28. Carbon removal project methodologies were hotly debated with disagreement over the types of removals permitted, specifically nature-based versus technology-based. Additionally, matters of equal importance that remain unresolved include measures to safeguard the human rights of local communities and special considerations for least-developed countries and small island states.

How would the lack of agreement at COP28 influence the implementation progress?

While the COP28 outcomes do not impede countries from using cooperative approaches under Article 6.2, the lack of clarity on procedural issues may slow the pace of actual implementation and the flows of investment, technology, and expertise, creating uncertainty in carbon markets. It also means early-adopter countries must navigate the complexity of anticipating future rules. Failure to agree on Article 6.2 means that bilateral agreements and trades will increasingly take place without a complete framework.

As of today, only three out of the 78 bilateral agreements (Swiss-Ghana, Swiss-Thailand, and Swiss-Vanuatu) signed between buyer and host countries have advanced to the 'authorisation' stage. Among those agreements, only one (Swiss-Thailand) has completed the transfer of ITMOs.



Host countries without established national legal frameworks and infrastructure for participation in international carbon markets may be discouraged and adopt a 'wait and see' approach, aiming to minimise the risk of potential legislative changes in response to evolving Article 6 rules and requirements. However, when participating governments delay the adoption of clear policy frameworks and detailed guidelines (e.g. the list of eligible activities and procedures for project registration), market participants may find it challenging to ascertain whether mitigation activities are investment-ready and if an announced Article 6.2 collaboration will come to fruition and progress to the actual implementation stage.

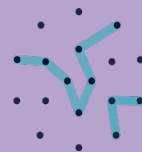
In the context of Article 6.4, the mechanism is currently non-operational due to incomplete methodology guidelines, safeguard rules, and the absence of tools to promote sustainable development (i.e. co-benefits). This means that Article 6.4 operationalisation is delayed for at least another year. Countries seeking to generate emission reduction units (A6.4ERs) through the UN-backed scheme will have to wait or register their projects in voluntary carbon markets, which has seen major independent standards recently announcing plans to collaborate on common principles and requirements. Consequently, the extended delay in operationalising Article 6.4 might lead to an increased attraction to Article 6.2 projects wholly dependent on bilateral agreements.

The critical need for timely finalisation of Article 6

At COP30 next year, countries are expected to submit their next NDCs with 2035 targets that reflect a significant progression compared to the previous targets. The willingness of governments to raise their climate ambition towards the 1.5°C goal of the Paris Agreement will partly depend on the full implementation of Article 6 market mechanisms, which must be underpinned by robust rules that ensure the environmental and social integrity of carbon projects.

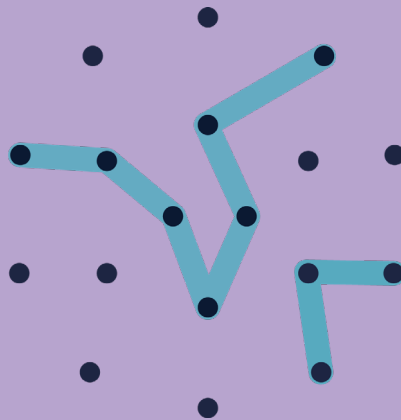
So far, only a handful of countries have benefited from the practical rollout of Article 6 activities and investments. For example, Thailand has implemented an e-bus program to gradually replace combustion engine buses in metropolitan Bangkok with electric vehicles. This project is feasible with the [climate finance obtained from an Article 6 arrangement](#), where there is a clear demand from Switzerland to procure 500,000 million units of ITMOs that will be generated through the initiative.

Globally, the demand for Paris-aligned Article 6 credits remains elusive due to the unfinished market rules, particularly surrounding the possibility for host governments to revoke ITMOs after authorisation. The outstanding matters regarding Article 6.2 and Article 6.4 should be



finalised in the coming months for adoption at COP29 to provide regulatory certainty for both buyers and sellers. This move is important for allowing countries to take into consideration the role of international collaborations in the upcoming NDC revision. Meanwhile, the strong demand for VCM credits, evidenced by record retirements since Q4 2023,⁴ indicates that the global voluntary market will continue to play a crucial role in driving investments towards additional carbon projects that would otherwise be underfunded.

⁴ Data from MSCI Carbon Markets shows that 36 million tonnes of carbon credits were retired in December 2023, exceeding the previous high of 30 million tonnes in December 2021. This trend was reported to continue in January 2024. See <https://carboncredits.com/carbon-market-chronicles-2023-unveiled-and-2024s-inflection-points/>.



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