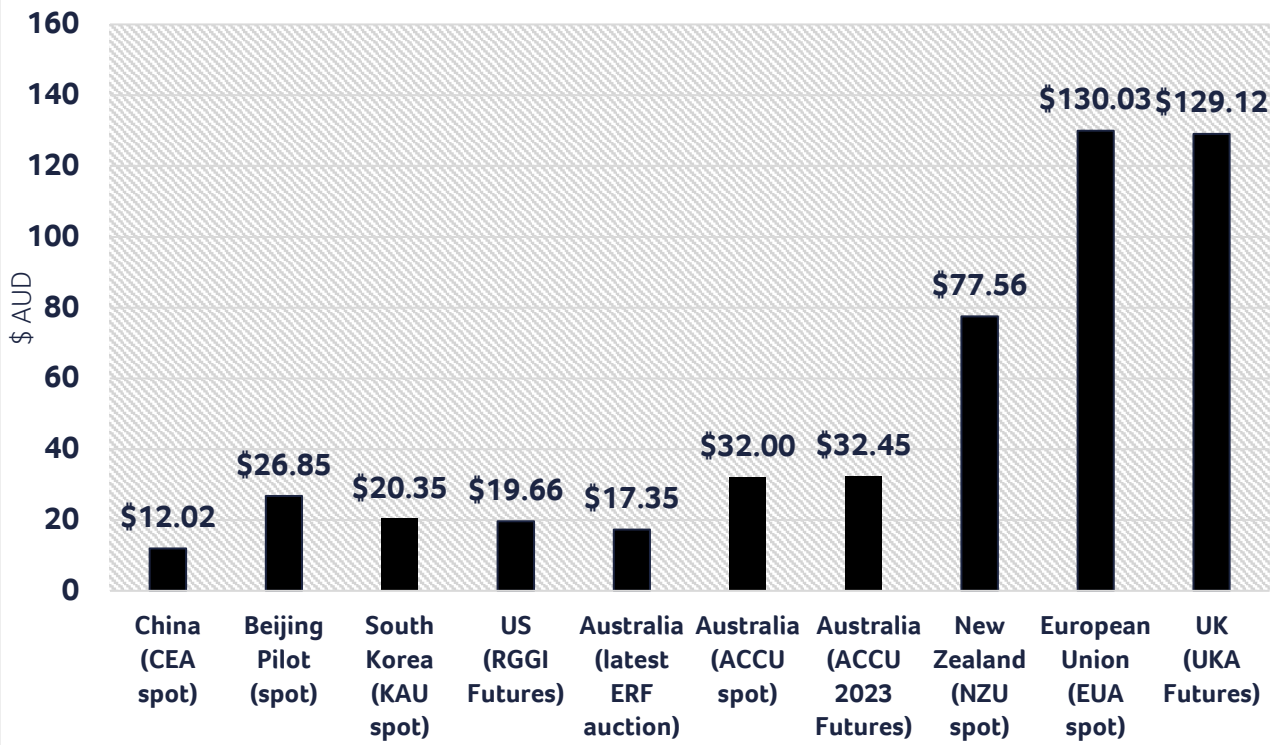
Global Carbon Prices



Sources: Carbon Pulse | CER | Jarden | ICE | KRX | Commtrade

Price dates: China ETS (30/11/22), South Korea (18/11/22), Aus Spot (30/11/22), RGGI (30/11/22), EU (30/11/22), UK (30/11/22), Aus Futures (30/11/22), Beijing (30/11/22), Aus Auction, New Zealand (30/11/22)

Global Climate Policy Update

Internationally:

Policy & Market Tracker
47 National[1] Carbon Pricing Schemes
36 Sub-National[1] Carbon Pricing Schemes
194 Parties[2] Ratified Paris Agreement
$84 Billion[1] Total Revenue of Carbon Pricing Mechanisms

- COP27 concluded with good, but not ideal, progress on key issues such as loss and damage and global cooperation through carbon markets. On loss and damage, the final decision saw developed countries agree to establish a fund for nations most vulnerable to the impacts of climate change, while leaving detailed funding arrangements to be negotiated at COP28. On the rules, procedures and modalities for Article 6 market mechanisms, the final decision text of Article 6.2 and Article 6.4 represented progress made in fleshing out details for operationalising the two major types of international market mechanisms, with further calls for finalising the common reporting frameworks, enhancing data transparency, and ensuring the realisation of social and environmental co-benefits. For more information on the major outcomes of COP27, please see CMI's COP27 Key Takeaways.
- The G20 Leaders' Summit produced a communique that addressed climate change on several fronts, with the Group's leaders reasserting their commitments to working together on some of the world's most pressing issues. A clear message was sent from the Summit – the way to respond to the climate and energy crises is to accelerate clean energy transitions. Regarding this, a 'Just Energy Transition Partnership' was launched in Bali to help Indonesia, the world's fifth-largest greenhouse gas (GHG) emitter, shift from fossil fuels to renewable energy. The

financing package will mobilise USD20 billion over the next three to five years to support the development of solar and geothermal energy, as well as phasing out coal-fired power plants, which account for 61% of the country's electricity. The package fund will come from public and private financing, with seven global financial institutions – Bank of America, Citi, Deutsche Bank, HSBC, Macquarie, MUFG, and Standard Chartered – agreeing to participate in the partnership.

- The World Bank announced a new trust fund to pool public and private funding for carbon mitigation projects. The Scaling Climate Action by Lowering Emissions (SCALE) partnership will provide results-based climate finance through grants. Governments can use the grants for low-carbon development, as well as to generate carbon credits that can count towards their nationally determined contributions (NDCs) or trade in international carbon markets. According to the World Bank, SCALE aims to achieve three objectives: (1) channel additional funding to low- and middle-income countries; (2) help bridge the gap between the supply and demand for high-quality emission reduction credits; and (3) assist countries access global carbon markets. It will also have an associated fund – Enabling Access to Benefits while Lowering Emissions (EnABLE) to enhance the inclusion of marginalised communities and indigenous peoples in the program.

In Europe, the Middle East and Africa:

- The European Union (EU) is faced with a new challenge in finalising the details of its carbon border adjustment mechanism (CBAM). A recent report by the European Roundtable on Climate Change and Sustainable Transition (ERCST) argued that the EU has failed to recognise the sovereign right of countries in choosing different types of climate policy instruments, thus risking to contravene the spirit of the Paris Agreement. The passage of the *US Inflation Reduction Act* has prompted the EU to consider that their largest strategic partner has adopted an incentive-based approach to support decarbonisation efforts instead of imposing carbon prices comparable to that of the EU ETS. The report has called for a non-adversarial and cooperative approach to address carbon leakage and competitive distortions in light of climate policy differences.
- A 13-member steering committee of African leaders launched the Africa Carbon Markets Initiative (ACMI) at COP27. The initiative seeks to expand Africa's participation in voluntary carbon markets to support energy transition and economic development. ACMI aims to produce 300 million credits annually by 2030, which would unlock USD6 billion in revenue and create 30 million jobs. By 2050, it targets the creation of 1.5 billion credits annually in Africa, leveraging over USD120 billion and generating over 110 million jobs. For the demand side, the steering committee is working with several potential buyers and financiers, such as Export Trading Group, Nando's PERi-PERi North America and Standard Chartered, to set up advance market commitments for future credits from the continent.
- Ghana and Switzerland authorised the first internationally transferred mitigation outcomes (ITMOs) project under Article 6.2 of the Paris Agreement. With the support of the UN Development Program (UNDP), the project will train thousands of rice farmers in Ghana to practice sustainable agriculture to reduce methane emissions and generate extra income through improved water use. The ITMOs issued will subsequently be retired by Switzerland to account for its federal government's emitted GHGs, but will not be counted towards the country's NDC. Ghana has also expressed interest in signing a bilateral agreement with Singapore on the trade of ITMOs.

In China:

- The Ministry of Ecology and Environment has issued a draft allocation plan for the 2021/2022 compliance cycle of the Chinese National Emissions Trading Scheme. It proposes to hand out 0.82 (2021) and 0.8159 (2022) carbon allowances per megawatt hour of electricity generated by coal-fired power plants with a capacity of over 300MW, representing a 6.5% and 6.97% cut from the previous allocation level of 0.877 (2019 and 2020). Regulated entities will have until 31 December 2023 to surrender Carbon Emission Allowances (CEAs) to cover their carbon emission released in the two years.
- The State Administration of Market Regulation has jointly released an implementation plan with eight other government agencies to build a standard and measurement system for GHGs. As outlined in the plan, China will establish accounting standards for four key areas: carbon emissions, carbon reduction, carbon removal and carbon markets. These standards will be used in multiple sectors, including energy, industry, urban and rural construction, transportation, and agriculture, for achieving China's 'dual carbon' goal – peaking carbon emissions by 2030 and becoming carbon neutral by 2060.

- **Beijing Tsinghua University's professor Duan Maosheng** said that China is considering opening its national emissions trading scheme (CETS) to Articles 6.2 and 6.4 credits, as the country's growing demand outweighs the supply of Chinese Certified Emissions Reductions (CCERs). According to Carbon Pulse, the CCER program has been suspended since March 2017. The estimated CCERs still available are only 13 million units, while Chinese companies are allowed to use up to 225 million carbon credits for compliance purposes under the CETS.

In the Asia Pacific:

- **Australia** needs to increase its current emissions reduction rate by 40% to meet its 2030's climate target, according to the inaugural Annual Climate Change Statement to Parliament responding to advice from the Climate Change Authority (CCA). CCA further advised the Australian Government to develop a sector-based plan for net zero by 2050, including a national carbon market strategy that would map out Australia's use of carbon credits. The Statement was also accompanied by inventory and projections data. The latter estimated additional measures including the Government's Rewiring the Nation and Safeguard Mechanism reforms to achieve 40% reductions by 2030 and 48% by 2035. The "additional measures" projections continued Kyoto Protocol practice of excluding voluntary carbon market cancellations of ACCUs, estimated at 3Mt in 2030, but noted this accounting would be reviewed.
- **South Korea** seeks to open negotiations with the EU to gain an exemption for its exports under the CBAM. The country plans to negotiate with its third-largest trading partner on an agreement to reconcile the price differences between the South Korean Emissions Trading Scheme (SKETS) and the European Union Emissions Trading Scheme (see the Global Carbon Prices graph). At the same time, the country is exploring the potential use of ITMOs to help meet its NDC targets. At COP27, Gabon indicated the potential to partner with South Korea to sell carbon credits from Central Africa.
- **Japan** will lead the Article 6 Implementation Partnership that it launched at COP27. More than 60 countries, including Australia, have signed up for the program, which will set up three working groups next year covering authorisation, registries and reporting to facilitate understanding of Article 6 rules and their linkages with NDCs. The program will also support developing countries submitting their first biennial transparency reports by 2024. In addition, Japan plans to use 50 million to 100 million units of ITMOs to help fulfil its 2030 NDC target, making the country one of the biggest potential buyers of Paris-aligned carbon credits.
- **Thailand** attended COP 27 with a renewed ambition in its climate commitments. In its second updated NDC, the country raised its 2030 emissions reduction target from 20% to 30% and pledged to reach carbon neutrality by 2050, 15 years earlier than the timeline set in the first updated NDCs. In June 2022, the country signed a bilateral agreement with Switzerland to cooperate on clean energy and electric vehicle project development. Meanwhile, **Vietnam** has also lifted its 2030 unconditional and conditional emissions reduction targets from 9% and 27% to 15.8% and 43.5%, respectively.
- Following the promulgation of a presidential degree in 2021, **Indonesia** has adopted ministerial regulations to support the implementation of emissions trading schemes. The country will allow carbon credits to be sold to domestic and international buyers once its own NDC targets are met. At this stage, the Indonesian Stock Exchange (IDX) is exploring partnership opportunities to develop a carbon trading platform. Metaverse Green Exchange, a Singapore-based fintech company, recently announced that it would assist IDX in building its capacity to design the infrastructure.
- **Singapore** will raise its carbon tax from SGD5/tCO_2e to SGD25/tCO_2e in 2024 and SGD45/tCO_2e from 2026 onwards after the passing of its Carbon Pricing (Amendment) Bill on 8 November. Emissions-intensive trade-exposed (EITE) sectors will have a portion of their carbon emissions exempted to adapt to the higher tax rates and use carbon credits to account for 5% of their taxable emissions. The island nation has announced Article 6.2 carbon deals with Peru, Colombia, Morocco, Thailand and Vietnam and is negotiating similar partnerships with 20 countries.
- **Fiji** launched a green taxonomy at COP27 to communicate its sustainable development priorities with investors. The Fijian Sustainable Bond Framework is the first of its kind developed by a Small Island Developing State and is expected to play an integral part in Fiji Sovereign Blue Bond issuance in 2023. Meanwhile, Tuvalu and **the Federated States of Micronesia** have updated their NDCs, with the former committing to a net zero goal by 2050 and the latter pledging to reduce 65% of its black carbon and methane emissions from diesel-electric generation by 2030.

In the Americas:

- US President Joe Biden met with China President Xi Jinping at the G20 Summit in Bali, Indonesia. While acknowledging that both countries have competing priorities across various issues, President Biden underscored that the US and China must work together to address critical transnational challenges such as climate change. The two leaders agreed to empower key senior officials to maintain communication and deepen constructive efforts on this issue. Previously, the cooperation between the US and China helped pave the way for the successful adoption of the Paris Agreement in 2015 but had been stalled.
- US Special Presidential Envoy for Climate John Kerry announced an initial plan to develop the Energy Transition Accelerator scheme that would enable companies to purchase carbon credits to support developing countries in clean energy transitions. The initiative was launched at COP27 in partnership with two philanthropic groups – the Bezos Earth Fund and Rockefeller Foundation. According to Presidential Envoy Kerry, mobilising private sector capital into emerging and developing economies is the only way to keep the 1.5°C temperature goal within reach. Exact details on the scheme are to be developed through 2023 with ideas being explored, including it is available only to companies with science-aligned targets and just for Scope 3 emissions. Participating jurisdictions must undertake social safeguards to benefit local economies, including job creation and training support.
- Brazil's president-elect, Luiz Inácio Lula da Silva, pledged to end deforestation in the Amazon after winning the October election. The country has lost around 20% of its original forest in the biome, an area twice the size of Germany, according to a Brazilian research institution Imazon. In this regard, Brazil is reportedly reaching out to Indonesia and the Democratic Republic of the Congo to form a strategic alliance on rainforest protection. The partnership could see the three countries, home to 52% of the world's primary tropical forests, make joint proposals on carbon markets and finance.
- The environment ministers of Canada and Chile, Steven Guilbeault and Maisa Rojas Corradi, jointly rolled out the Global Carbon Pricing Challenge at COP27. This Canadian-led initiative aims to expand the use of carbon pricing by strengthening existing systems and supporting emerging ones. Under the program, a forum for dialogue and coordination will be created to make carbon pricing systems more effective and compatible. Currently, about 20% of global GHGs are covered by carbon pricing, with the new initiative targeting a total coverage of 60% by 2030.

Sources: World Bank[1], UNFCCC[2], Carbon Pulse, QC Intel, S&P Global, UNDP, Reuters, The Edge

Market Commentary

The nexus between Article 6 and nature-based solutions at COP27

Nature-based solutions (NbS) were mentioned for the first time in a COP Cover Text at COP27. In this year's cover decision known as the Sharm el-Sheikh Implementation Plan, countries were "encouraged to consider…nature-based solutions or ecosystem-based approaches…for their mitigation and adaption action while ensuring relevant social and environmental safeguards".

The inclusion of NbS within the COP27 decision was a significant breakthrough considering the removal of a similar statement from *the Glasgow Climate Pact* at COP26. This achievement was partly driven by a clearer understanding of the concept of NbS: in March 2022, the United Nations Environment Assembly adopted a multilaterally agreed definition of NbS as:

> Action to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems, which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services and resilience and biodiversity benefits.[1]

[1] UNEA (2022), 'Resolution adopted by the UNEA on 2 March 2022', https://wedocs.unep.org/bitstream/handle/20.500.11822/39864/NATURE-

The critical role of NbS in climate mitigation and adaptation should not be understated, given that around a quarter of the world's human-induced GHG emissions are attributable to timber harvesting, agriculture, and land use change activities.[2] However, a UN-led report has also shown that forests, when protected or restored, could contribute up to 27% of the solution to help avert climate catastrophe. Concern has been raised in using the term to the exclusion of Indigenous peoples and close linkages will be required to ensure inclusion in the development, implementation, and management of NbS.

Most Parties to the Paris Agreement have designated NbS as part of their climate strategies. According to a recent analysis, 84% of all updated NDCs as of 2021 have committed to restoring or protecting ecosystems. However, with an estimated USD4.1 trillion investment gap in NbS remaining to be addressed,[3] many lower and middle-income countries have turned to carbon markets as a potential source of climate finance. Additionally, the impact of ongoing Article 6 developments on projects that reduce or remove GHG emissions using natural resources remains uncertain.

Article 6 decisions at COP27

While COP27 has made considerable progress on several technical aspects of international emissions trading (e.g. registries, reporting, and review),[4] key decisions regarding methodology development have been deferred, including on:

Emission removals

Aside from technology-based sequestration like carbon capture and storage, removal activities include a range of NbS such as afforestation, reforestation, revegetation, wetlands restoration, and soil carbon storage.

The Article 6.4's Supervisory Body's draft recommendations on removal activities encountered pushback from some observers that were concerned about the lack of social and environmental safeguards in the guidance. Consequently, the decision was postponed to COP28.

Emission avoidance

Whether Article 6-aligned projects could be issued carbon credits for emission avoidance, and whether this includes NbS, continues to be debated.

Such activities could include investment in renewable energy and energy efficiency, as well as the protection of natural carbon stocks such as forests, grasslands, and mangroves. Others have suggested these to be included in emissions reduction activities.

Regarding Article 6.4 and Article 6.2, the negotiations and decisions on this matter have been delayed until 2023 and 2024 respectively. Proving additionality will likely be a contentious issue over the next two years.

Oceans, forests and agriculture received special mention in the cover decision. Agriculture had debates in the Koronivia Work Program about the inclusion of food security and systems with the former explicitly linked in the cover decision. Oceans continued its growing importance in UNFCCC COPs after the COP23 Ocean pathway initiative. A formal climate and ocean dialogue was integrated into the COP process at COP27 via the cover decision.

BASED%20SOLUTIONS%20FOR%20SUPPORTING%20SUSTAINABLE%20DEVELOPMENT.%20English.pdf?sequence=1&isAllowed=y

[2] IPCC (2019), 'Special Report on Climate Change and Land: Summary for Policymakers', https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/

[3] United Nation Environment Program (2022), 'G20 Leadership Required to Catalyse Private Capital Inflow for Nature-based Solutions', https://www.unep.org/news-and-stories/press-release/g20-leadership-required-catalyze-private-capital-inflow-nature-based

[4] See CMI's COP27 key Takeaways, https://carbonmarketinstitute.org/app/uploads/2022/12/COP27-key-takeaways-FINAL.pdf

Implications after COP27

The current Article 6 market framework, albeit incomplete, has been sufficient to foster bilateral and multilateral cooperation among countries.

Outside the COP27 negotiating rooms, the number of partnerships announced signalled increased national interest in engaging with Article 6.2 via NbS projects.

These partnerships include the first ITMO trade authorised by Ghana and Switzerland, which will create mitigation outcomes from sustainable rice farming while improving local livelihoods. Switzerland has reportedly signed similar agreements with six other countries - Thailand, Vanuatu, Dominica, Peru, Senegal and Georgia.

Japan has announced partnerships with 25 countries under its Joint Crediting Mechanism (JCM). With Cambodia and Laos, the approved methodologies include reducing deforestation and forest degradation projects.

Meanwhile, Singapore's MOU with Indonesia will see the two ASEAN countries work together on research involving sequestering carbon in marine and coastal ecosystems.

Moving forward, these countries will be required to align their carbon projects with the methodology requirements agreed by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA).

Additionally, the recent negotiations witnessed increased calls for social safeguards to ensure that project oversight prioritises human rights and the rights of indigenous peoples. Measures such as free, prior and informed consent, communities' participation in projects from initial design to implementation, monitoring and reporting, and access to independent legal counsel and grievance redress mechanisms, are important to protect the rights of the local communities.

Integrity issues will also be given heightened consideration in order to mitigate reputational risks. Regarding this, the role of technology is becoming more prevalent in monitoring the supply chains of NbS. For example, Verra and Pachama will pilot a digital measuring, reporting and verification (MRV) platform to increase the transparency and integrity of forest carbon projects. The World Resources Institute (WRI) is also building a geospatial data system to enhance the MRV of land-use projects in carbon markets.

Despite early attempts, no formal connection was made between COP27 and the UN Biodiversity Conference, COP15 now underway.

In conclusion, COP27 has not finalised the detailed rules for activities including reducing deforestation, reforestation, afforestation, nature restoration, and other related methodologies. Decisions on advancing these types of projects must address the potential issues of integrity, transparency, and social and environmental safeguards, to ensure these methodologies are robust and contribute to evident mitigation outcomes.