



# Upscaling Carbon Markets Across APAC

*Commentary and recommendations*

October 2023

## Authors



*Growing Asia's Markets*

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## 1. Executive Summary

### 1.1. Core Objective of this Paper

This paper makes recommendations to policy makers, regulators, industry bodies and financial market participants with the aim to promote the integrity and liquidity of Asia Pacific (APAC)<sup>1</sup> compliance carbon markets (CCMs) and voluntary carbon markets (VCMs).

Where appropriate, this paper delineates the individual challenges and opportunities for improving and scaling CCMs and VCMs separately.

### 1.2. Current State of Play of APAC Carbon Markets

Various types of carbon markets and policy measures are currently in force across APAC. Furthermore, there are several propositions under development, including: (i) the world's largest CCM by volume in Mainland China is expected to expand its scope; (ii) new CCMs are either starting to trade or are due to launch in India, Indonesia, Japan, and Malaysia; and (iii) carbon market reforms in Australia and New Zealand are set to increase decarbonisation ambition.

	CCM	VCM	Carbon Levy
Australia	●	●	-
China	●	●	-
Hong Kong	-	●	-
India	●	●	-
Indonesia	●	●	●
Japan	●	-	●
Korea	●	-	-
Malaysia	●	●	●
New Zealand	●	●	●
Singapore	-	●	●

- in force
- under development
- under consideration
- not yet contemplated

<sup>1</sup> In this paper the terms "Asia Pacific" and "APAC" refer to the ten jurisdictions featured in this paper namely: Australia, Hong Kong SAR, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, the People's Republic of China, and Singapore.





### 1.3. Recommendations for the Development of APAC Carbon Markets

#### Ambition and Planning

Ensuring that APAC carbon markets are capable of playing a meaningful role in the transition to net zero for the region as a whole and also supporting the ability of individual jurisdictions to achieve their decarbonisation commitments under the Paris Agreement, requires governments, regulators, and financial market intermediaries to:

- carefully evaluate the current status of carbon markets in the region, the developments that are planned in respect of those markets, and extent to which those developments are capable of enabling those markets to achieve their goals;
- understand the key issues that impact CCM and VCM development and how they can be managed;
- clearly define the role of carbon credits as regards their ability to support the transition to net zero;
- collaborate with counterparts in other jurisdictions (across APAC and beyond) to benefit from shared knowledge and experience; and
- implement (and periodically review) plans that optimise APAC carbon market coverage and impact in line with committed decarbonisation targets.

It is also imperative that emissions targets and strategies are supported by real-economy policies and incentives at the national and industry level.

#### Principles and Policies

Above all, to scale effectively, there is an imperative to ensure CCMs and VCMs in APAC are liquid, have high-integrity and are interoperable, and align with best international standards.



Core principles



Compliance market coverage



Role of voluntary markets



Legal and regulatory status

Irrespective of their individual features or attributes, it is important that carbon markets across APAC adhere to the core principles of (i) integrity, (ii) transparency, (iii) stability, (iv) and accountability. These interlinked principles can collectively underpin investor confidence, help APAC carbon markets to scale and in turn help to support the transition to net zero.

CCMs should focus on those industry sectors that generate the highest levels of tCO<sub>2</sub>e within the jurisdiction in which they operate so as to optimise CCM effectiveness.

VCMs are an important emerging market mechanism for further enabling the transition to net zero, though they should not be seen as a long-term substitute for avoiding or reducing greenhouse gas emissions other than to the extent necessary in hard-to-abate industry sectors.



In some jurisdictions it is permissible for VCM-generated credits to be used to satisfy mandatory emissions reduction obligations within CCMs. However, this should be controlled, to ensure that mandatory obligations to reduce emissions are not inadvertently diluted.

To help facilitate transition to net zero, policymakers could consider the extent to which it may be possible to apply the revenues generated by carbon markets as ‘catalytic’ or ‘concessional’ capital, including to finance climate mitigation and adaptation projects and technologies. We also encourage governments and regulators to agree on the guardrails that are required to prevent greenwashing.<sup>2</sup>

### Legal and Regulatory Classification

To ensure that APAC carbon markets develop sufficient depth and liquidity, ASIFMA encourages governments and regulators to prioritise clarifying the legal and regulatory treatment of carbon assets/instruments having regard to the position adopted in more mature markets, as well as work by other trade bodies in this regard.<sup>3</sup> This is important because the legal and regulatory classification of carbon assets/instruments affects how (for example) title to them is evidenced and transferred and security interests may be created over them (and consequently how trading practices evolve).

More detailed information about the legal nature and treatment of carbon allowances (in CCMs) and carbon credits (in VCMs) is provided in Annex II to this paper.

### Systems and infrastructure



CCM mechanisms



Market intermediaries



Combatting  
fragmentation



Linking markets

As CCMs mature, policymakers across APAC could consider adopting (i) market-based pricing mechanisms (such as auctions) for the allocation of carbon allowances (rather than allocation free-of-charge) and (ii) where appropriate absolute caps on emissions (rather than intensity-based caps based on historic emissions output).<sup>4</sup> Such approach is consistent with more mature markets like the EU Emissions Trading Scheme, and further incentivises emissions reduction and efficiency of this market mechanism.

Given their importance in facilitating access to, and generating liquidity within, carbon markets, intermediaries might also be required to implement appropriate operational safeguards and customer protection measures, with proportionate measures in place in the event of non-compliance, to minimise the potential loss to investors and contain systemic risk.

<sup>2</sup> Such guardrails may include monitoring the volume and vintage of available carbon credits and taking steps to ensure that market access is structured so as to favour carbon credits verified as having the highest integrity.

<sup>3</sup> By way of example, the International Swaps and Derivatives Association (ISDA), who published ‘Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US’ in 2022.

<sup>4</sup> An absolute cap refers to a pre-determined, absolute quantity of tCO<sub>2</sub>e. By contrast, an intensity-based cap refers to a pre-determined quantity of tCO<sub>2</sub>e that is relative to a measure of input or output. An intensity-based cap is therefore capable of moving up and down relative to the benchmark against which it is set.





Any decision to link CCMs together must be results driven i.e., to accelerate decarbonisation in each underlying market, and to generate mutual and material economic benefits. Relevant authorities should consider the extent to which certain benefits associated with linking markets (e.g., cross-market audit) may be realised longer-term by centralising or sharing access to systems, such as carbon registries, carbon exchanges and carbon data repositories, in order to streamline processes and reduce operating costs, provided always that appropriate safeguards are in place.

### Regulation and Oversight



Proportionate regulation



Clear lines of responsibility



Oversight of analytical and evaluative services

Regulation of carbon markets should be proportionate, carefully balancing the desire for market integrity with the imperative to avoid stifling growth and innovation. This is particularly the case for the VCMs which are still at a nascent stage of their development, should continue to be allowed to evolve and for best practices to emerge.

In relation to application and enforcement of regulation, it is important that relevant authorities strive to set clear lines of responsibility and cooperation between the entities that are responsible for the operation of carbon markets at primary and secondary level, including environmental and financial agencies, to ensure there is a coordinated and consistent approach that minimises opportunities for confusion or ambivalence. Adequate consultation, including with all market participants – including financial intermediaries – is also critical.

In relation to those entities offering analytical or evaluative services relating to carbon markets (including third party verifiers of carbon credits), ASIFMA recommends that they should be subject to regulatory oversight proportionate to the impact that their activities have on the underlying market or the degree to which the regulatory system relies on them, to promote alignment with the standards that are identified as reflecting international best practice and help combat fragmentation.

Some more detailed recommendations relating to the application of regulatory principles used to support securities and commodities derivatives markets in the context of the development of carbon markets across APAC are set out in section 10.4 (*Key Regulatory Principles*) of this paper.

### Data, analytics and market protection



Data and disclosure



Market monitoring



Market stability

Access to, and the content and integrity of, emissions-related data is pivotal to the success of CCMs. For these markets, effort should be made to lift the disclosure bar as high as possible whilst recognising that this may need to be undertaken incrementally.



Relevant authorities should develop trading rules, compliance programs and codes of conduct for participation particularly with regard to CCMs, while the nascent state of VCMs means that they should be allowed to evolve while best practices continue to develop. For VCMs particularly, focus should be on fostering market standards related to carbon credit integrity.

There should be a clear framework for conducting market surveillance and that relevant authorities are furnished with the necessary powers to detect, prevent, deter and sanction exploitative behaviour. Whilst careful consideration must be given to their implementation and interface, relevant authorities could consider how using digital systems may have the potential to support sound trading practices.

The application of market stability mechanisms should be triggered according to strict criteria. Such mechanisms should be subject to regulatory review and should also be temporary, so as to avoid undermining long-term price signals towards net zero transition. Regulators should have the authority to share public and non-public information with domestic and foreign counterparts to promote market stability and transparency.



## 2. About this Paper

### 2.1. Aims and Objectives of this Paper

Well-functioning, robust and liquid carbon<sup>5</sup> markets have an important role to play in supporting the global transition to net zero.<sup>6</sup>

This paper aims to help governments, regulators, and financial market intermediaries across APAC identify the key considerations relating to the development of CCMs and VCMs across the region.

Specifically this paper aims to:

- build on the existing body of work relating to the development of carbon markets, by looking at the key issues from an APAC perspective; and
- propose recommendations to governments, regulators and financial market participants that support the integrity and decarbonisation capacity of carbon markets across the APAC region.

Where possible, this paper delineates the challenges and opportunities for improving and scaling CCMs and VCMs separately.

### 2.2. Annex I – Jurisdiction Overview

This paper is accompanied by an annex that provides an overview of the CCMs and VCMs currently operating in ten APAC jurisdictions and has been prepared by the leading law firms referred to therein. The jurisdictions covered by the annex are Australia, Hong Kong SAR, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the People’s Republic of China<sup>7</sup> and Singapore.

### 2.3. Annex II – Legal Analysis

This paper is accompanied by an annex that considers in detail the legal nature and treatment of carbon allowances (in CCMs) and carbon credits (in VCMs) and has been prepared by King & Wood Mallesons.

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<sup>5</sup> In this paper, references to ‘carbon’ and ‘CO2e’ include carbon dioxide and equivalent greenhouse gases.

<sup>6</sup> In this paper, references to ‘net zero’ refer to the volume of human made emissions of greenhouse gases being reduced to zero on a net basis i.e., after offset.

<sup>7</sup> In this paper, unless a contrary indication appears, references to China, Mainland China and the PRC are references to the People’s Republic of China excluding the Hong Kong Special Administrative Region, the Macau Special Administrative Region and Taiwan.





### 3. Status and Role of Carbon Markets

#### 3.1. Carbon Markets Overview

Climate change poses significant global economic, financial, social, and environmental risks.

Our ability to limit global warming to 1.5°C depends on our ability to radically reduce human generated CO<sub>2</sub>e emissions. Significant transformational changes are required. Businesses have a role to play in pursuing efforts to avoid, reduce and/or neutralise scope 1, 2 and 3 emissions<sup>8</sup> in their operations and across their value chains. Approximately 17% of global emissions are currently covered by an emissions trading scheme.<sup>9</sup>

When managed effectively, the price signals created by carbon markets promote emissions reduction while the capital generated through carbon markets can be applied to help finance carbon reduction and removal projects (including low carbon technology and renewable energy projects) to support net zero transition.<sup>10</sup>

CCMs and VCMs can both play a critical role in responding to climate change by incentivising emissions reductions and carbon offsetting through distinct mechanisms.

In summary, CCMs can serve as a vital regulatory tool to ensure that industries adhere to mandated emissions reduction commitments, while VCMs enable entities to reduce their negative climate impact by offsetting their emissions.

#### 3.2. CCMs

CCMs are regulated mechanisms established by governments or by international agreement to enforce emissions reduction targets pursuant to a cap-and-trade framework. A covered entity<sup>11</sup> must comply with emissions caps over a prescribed period, which may decrease over time in line with regulatory objectives. Businesses may be given or purchase their initial allocation of carbon allowances (e.g. by auction) with surplus allocations being able to be sold in a secondary market to entities seeking to increase their carbon allowance entitlement. This market approach helps to ensure a more efficient allocation of emissions to the most valuable activities and, if applied at a national level, can be aligned with emissions reduction commitments under the 2015 Paris Agreement.

Whilst CCMs share common features, the structure and priorities of individual schemes are different. They are also developing at different speeds according to a range of standards.

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<sup>8</sup> Scope 1, scope 2 and scope 3 refer to the classification of emissions pursuant to the Greenhouse Gas Protocol Corporate Standard published (as a joint initiative) by the World Resources Institute and the World Business Council for Sustainable Development to promote best practice for accounting and reporting emissions.

<sup>9</sup> ICAP. (2023). Emissions Trading Worldwide: Status Report 2023. Berlin: International Carbon Action Partnership

<sup>10</sup> According to the Emissions Trading Worldwide: Status Report 2023. Berlin: International Carbon Action Partnership, over USD224 billion of revenues have been raised by carbon markets since 2008 and over USD63 billion of revenues were raised by carbon markets during 2022 (with USD245.5 million raised in Korea and USD205.8 million raised in China).

<sup>11</sup> A covered entity is an entity that is mandated to participate in a compliance carbon market.



### 3.3. VCMs

VCMs are an important and emerging tool for supporting net zero transition that are driven by individuals, organisations, and other entities that voluntarily choose to reduce their carbon footprint or offset emissions. Participants purchase carbon credits or offsets, generated by projects like reforestation or renewable energy initiatives, and then retire them to offset a corresponding volume of emissions. These markets could encourage environmental stewardship beyond regulatory requirements, fostering sustainability commitments and corporate social responsibility.

VCMs allow for trade in both avoidance (also referred to as reduction) and removal credits.

Avoidance credits are generated by activities that reduce or prevent emissions that otherwise would have occurred, such as preventing deforestation. Although these activities do not address the concentration of greenhouse gases that are already in the atmosphere, they can help make business-as-usual emissions lower than they would otherwise be.

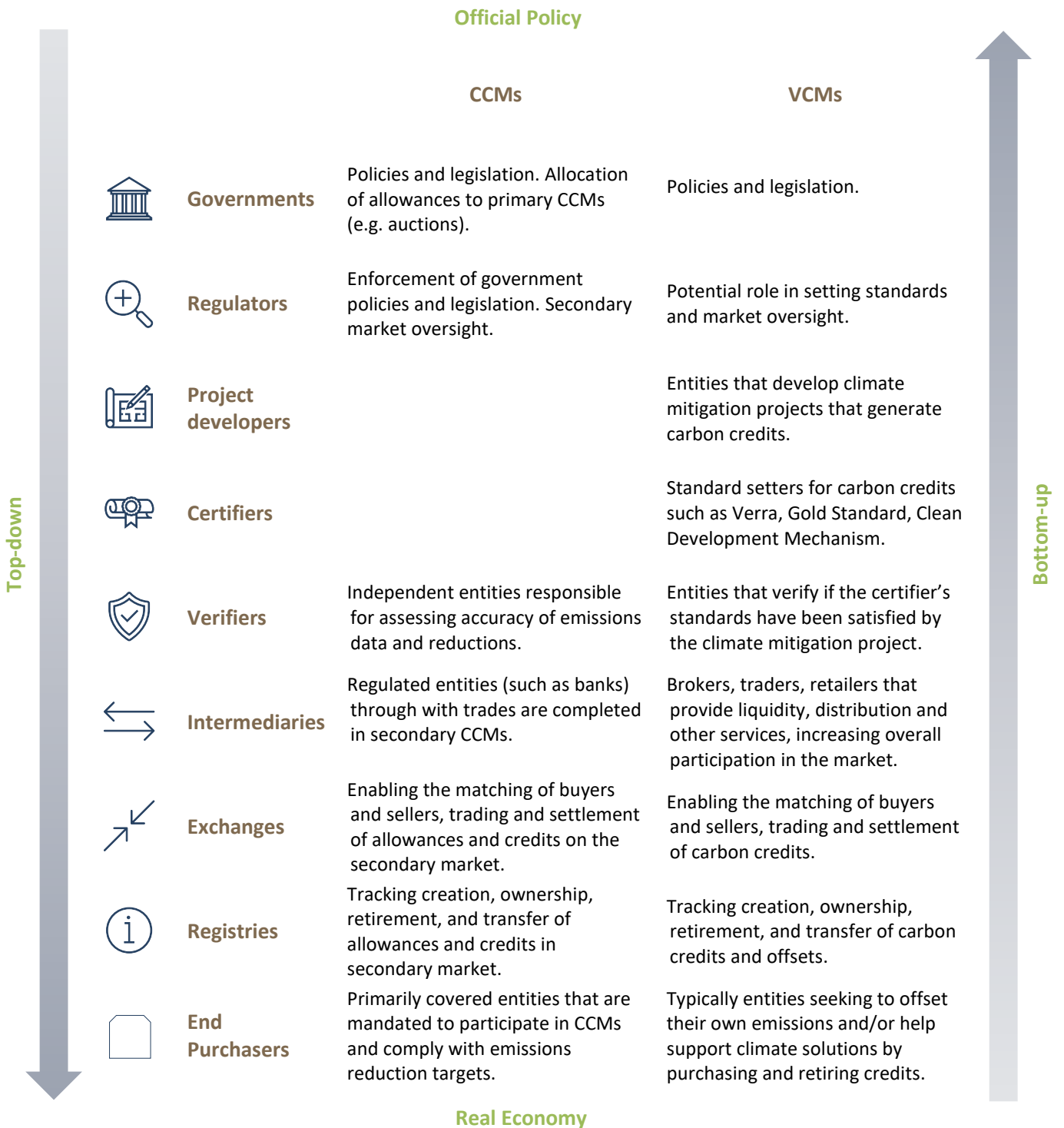
Removal credits are generated by activities that take greenhouse gases out of the atmosphere and store (sequester) them, which is currently possible via nature-based solutions, such as reforestation, or via engineered or technical solutions, such as the deployment of technologies for direct air capture and storage. Nature-based solutions tend to store carbon for shorter periods but are more mature and accessible, while engineered or technical solutions tend to store carbon for longer timescales but are less developed and more expensive.

Within the applicable class, carbon avoidance or removal projects are categorised according to their attributes. Once issued, carbon credits are often (but not always) registered with a registry that records the transactions relating to them to mitigate the risk of double counting.

VCMs (including the bodies that verify (volume) or certify (quality) carbon credits for trading) are currently minimally regulated relative to other financial product markets, with regulatory oversight mechanisms and boundaries relatively unclear whilst they evolve.

## 4. Key Stakeholders

The roles and responsibilities of the key stakeholders within carbon markets are summarised below.







## 5. APAC Carbon Markets Overview and Recent Developments

### 5.1. APAC Carbon Markets Overview

Unlike Europe, APAC has no supranational body to oversee the implementation of ‘equivalent’ domestic laws, regulations, and standards. By contrast, key policies and regulatory infrastructure can differ widely between APAC jurisdictions, which creates complexity for financial markets.

APAC comprises a diverse mix of:

- emerging and frontier markets that face the challenge of developing carbon markets at speed and at scale;
- economies that have historically relied heavily on fossil fuels; and
- economies that are highly vulnerable to the adverse effects of climate change.

At the same time, the region’s geographical diversity and high-growth markets also means it has significant scope to support carbon removal and reduction and efforts.

### 5.2. APAC Carbon Market Developments

Although by no means exhaustive, some recent developments by market are detailed below. More detailed information about the CCMs and VCMs that operate in APAC is provided in Annex I to this paper.

		CCM	VCM
	The Federal Government has reformed the Safeguard Mechanism to put Australia’s largest industrial emitters on a pathway to net zero by 2050. The updated scheme commenced on 1 July 2023, capturing around 219 facilities responsible for almost a third of the nation’s emissions.	●	○
	A report published by Hong Kong Exchanges and Clearing Limited in January 2023 highlights the “huge opportunities” for the development of Hong Kong as a regional carbon trading centre and super-connector bridging international investors and Mainland China’s carbon markets through its carbon market platform, Core Climate.	○	●
	India is expected to launch a domestic VCM in 2023 and a domestic CCM in 2026 pursuant to its Energy Conservation (Amendment) Act 2022.	●	●
	Indonesia is expected to launch a national CCM in three phases between 2023 – 2030. The country is also expected to launch a national VCM as well as implement a carbon levy.	●	●
	In February 2023, the Japanese government announced a ten-year plan in relation to carbon pricing which includes proposals for its Green Transformation League to transition into a national CCM from 2026.	●	○



The Korean Chamber of Commerce and Industry announced the establishment of a carbon reduction certification centre and has also prepared a set of draft carbon reduction certification standards. Korea's first domestic carbon credit exchange is expected to launch in the second half of 2023, complementing the Korea Emissions Trading Scheme (K-ETS).



In July 2023, the Malaysian Ministry of Finance began a feasibility study in collaboration with World Bank in relation to the potential implementation of a carbon pricing instrument. This accompanied the Minister of Economy's launch of the first phase of Malaysia's National Energy Transition Roadmap.



In June 2023, the Ministry for the Environment, the Ministry for Primary Industries and the Ministry of Business, Innovation & Employment issued a public consultation seeking feedback on proposed changes to the design of New Zealand's national emissions trading scheme.



In July 2023, the Ministry for Ecology and Environment published draft interim measures in respect of the anticipated relaunch of China's national VCM. Industry sector coverage under China's national CCM is expected to expand beyond the power sector in the near term to include petrochemicals, chemical engineering and steel.



Singapore's Climate Action Data Trust Data Dashboard is set to launch in Q3 2023 and will allow users (including individuals, consultancies, carbon credit suppliers, project developers, international organisations, verification bodies, media and civil society) to access carbon credit data free of charge. Details of Singapore's international carbon credits framework are also expected to be announced in the second half of 2023.










## 6. Ambition and Planning

To ensure the success of carbon markets governments, regulators, market participants and international bodies seeking to support and scale carbon markets in APAC should ideally coordinate to:

- (a) identify the **outcomes** that carbon markets are required to achieve;
- (b) identify the **core components** of each of those targeted outcomes;
- (c) identify the **enablers**, the **inhibitors**, the **risks**, and **risk mitigants** applicable to those core components; and
- (d) establish a **framework** that supports the delivery of those core components and mitigates the corresponding risks.

It is also imperative that emissions targets and strategies are supported by real-economy policies and incentives at the national and industry level.

Targeted outcomes		Core components
<ul style="list-style-type: none"><li>• Limit the rise in global temperatures to 1.5°C.</li></ul>		Ambitious emissions reduction targets
<ul style="list-style-type: none"><li>• High-integrity and interoperable carbon markets aligned with international best standards that support carbon reduction and removal.</li></ul>		Adherence to international best standards
<ul style="list-style-type: none"><li>• A price per tCO<sub>2</sub>e capable of supporting global net zero transition (and thereafter supporting the maintenance of global net zero).</li></ul>		Price transparency
<ul style="list-style-type: none"><li>• Use of offsets limited to unavoidable CO<sub>2</sub>e emissions.</li></ul>		Standardisation (e.g., science-based measurement and methodologies, documentation, trading and settlement)
<ul style="list-style-type: none"><li>• Zero carbon leakage,<sup>12</sup> double counting and double claiming.<sup>13</sup></li></ul>		Centralised, real-time and verified records
		Ongoing review of targets and performance
		Proportionate regulation and enforcement

<sup>12</sup> Carbon leakage occurs when an entity relocates its carbon intensive activities to a jurisdiction which adopts a more lenient approach towards CO<sub>2</sub>e emissions reduction.

<sup>13</sup> Double claiming occurs when two entities count the same carbon credit towards their emissions reduction goals, typically a business and a government.











## 7. Scaling CCMs Across APAC

### 7.1. Key Industry Sectors

Across APAC, the largest volumes of emissions are generated by the energy, industrial processes, agriculture, and waste sectors.<sup>14</sup> It is these sectors that will therefore have the greatest collective impact on APAC jurisdictions' ability to meet their milestone targets under the Paris Agreement and that should accordingly be the primary focus of APAC CCMs, with potential market-level adjustment to optimise each jurisdiction's individual carbon reduction outcomes.

The more mature CCMs currently in operation across APAC are located in Mainland China (covering 44% of national CO<sub>2</sub>e emissions) Korea (covering 74% of national CO<sub>2</sub>e emissions) and New Zealand (covering 49% of national CO<sub>2</sub>e emissions). The table below provides a brief overview of the coverage of those schemes.<sup>15</sup>

	CCM sector coverage								CO <sub>2</sub> e emissions coverage	Offset use
									%	%
China	●	●	-	-	-	-	-	-	44	5
Korea	●	●	●	●	●	-	●	-	74	5
New Zealand	●	●	●	●	●	-	●	●	49	0

● in force      ● under development      ● under consideration      - not yet contemplated



### 7.2. Reviewing Targets

Signatories to the Paris Agreement, will next be asked to update their nationally determined contributions in 2025. At that time, the world will be just five years away from milestone 2030 emissions reduction targets and twenty years away from targeted global net zero.<sup>16</sup>

<sup>14</sup> ICAP. (2023). Emissions Trading Worldwide: Status Report 2023. Berlin: International Carbon Action Partnership.

<sup>15</sup> Ibid.

<sup>16</sup> We note that some APAC jurisdictions (such as China and Singapore) currently target net zero emissions later than 2050. Please refer to Annex I to this paper for further details.



In order for APAC jurisdictions to meet their respective milestone CO<sub>2</sub>e reduction targets under the Paris Agreement, ASIFMA recommends that they:

- (a) expand the industry sector coverage of existing CCMs across APAC; and
- (b) establish new CCMs in APAC jurisdictions where they do not currently exist.



For CCMs to be effective in reducing emissions, they must address the domestic emissions reduction objectives and ‘fit’ with the regulatory infrastructure of the jurisdiction in which they operate. No individual CCM is perfect. The key to maximising the potential of CCMs is therefore to keep them under review and make regular refinements as circumstances and resources allow.

It is important to ensure that industry sector targets correspond to realistic transition pathways in the real economy, for instance electrification or a broader renewables energy strategy. This is to ensure that CCMs adequately incentivise a transition to lower carbon alternatives rather than simply imposing charges for the inability to transition.

### 7.3. Allocation of Allowances

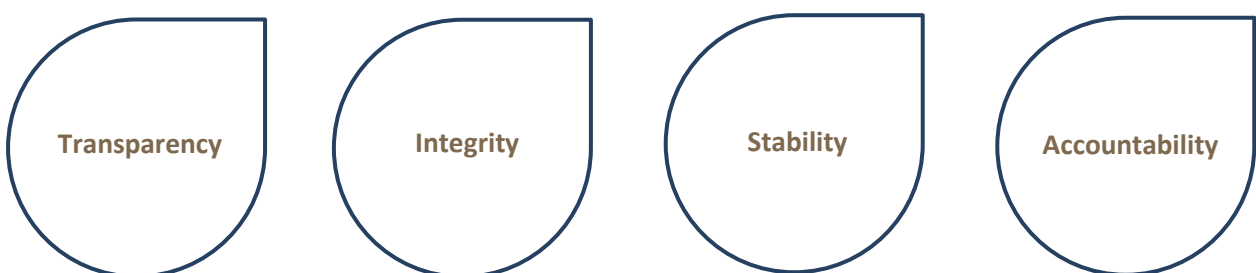
As CCMs are relatively new across APAC, a large proportion of carbon allowances are allocated for free by reference to benchmark criteria based on historic emissions levels. Free allocation is favoured in the early phases of a CCM’s development to reduce the risk of carbon leakage.

The table that follows provides an overview as to how carbon allowances are currently allocated within APAC’s CCMs.

	 Free allocation	 Allocation by auction
<b>China</b>	100%	0%
<b>Korea</b>	96%	4%
<b>New Zealand</b>	44%	56%

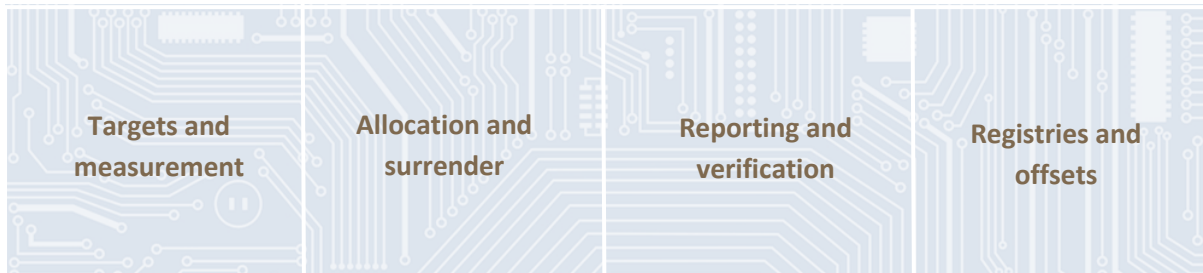
Whilst the method, volume and staging carbon allowance allocation, should ultimately be driven by supply and demand, as APAC CCMs become more mature, ASIFMA advocates for transition towards market-based pricing mechanisms (such as auctions) and an absolute cap on emissions (rather than an intensity cap) pursuant to which covered entities are financially incentivised to decarbonise and to engage in secondary market trading. ASIFMA supports staged auctions that control the volume of available carbon allowances according to a jurisdiction’s decarbonisation targets.

### 7.4. Four fundamental principles





All carbon markets should be driven by economics (according to science-based decarbonisation principles) that support and upwards trajectory for the price per unit of CO<sub>2</sub>e and ensure that the above four fundamental principles are fully integrated into all aspects of their operational infrastructure, including:



Whilst the development of CCMs should have regard to best practice and key learnings from other jurisdictions, there is no ‘one size fits all’ approach. The definition of ‘best practice’ will continue to evolve over time and should be applied with pragmatism (having regard to the needs of, and the challenges faced by, individual jurisdictions).

Mandatory emissions reduction can ultimately only be implemented through formal government policy, supported by targeted legislation and regulation. Implementing formal (top-down) change is however politically and economically sensitive, bureaucratic and time intensive. Accordingly, regulators, banks, and other financial market intermediaries, have an important role to play in the development of CCMs by actively engaging in the decarbonisation dialogue to encourage change within the real economy (from the bottom-up) and catalyse legislative action. Financial intermediaries have an important role to play in facilitating access to, and generating liquidity within, CCMs, particularly in the context of any market-based process for the allocation of carbon allowances.

### 7.5. Linking CCMs

Where a strong case exists for doing so, linking CCMs has the potential to promote greater:

- scale, liquidity and depth;
- alignment with international best practice; and
- transparency and cross-market audit,

all of which could have material benefits for governments, regulators, participants, investors, and end-users and if designed and implemented properly could help to combat greenwashing<sup>17</sup> and carbon leakage.

Any decision to link individual CCMs together must however be results driven i.e., accelerate decarbonisation in each underlying market, and generate mutual and material economic benefit.

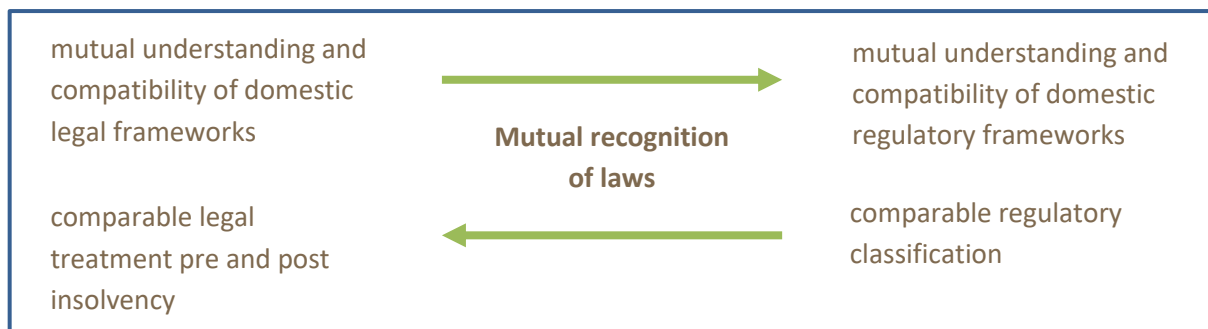
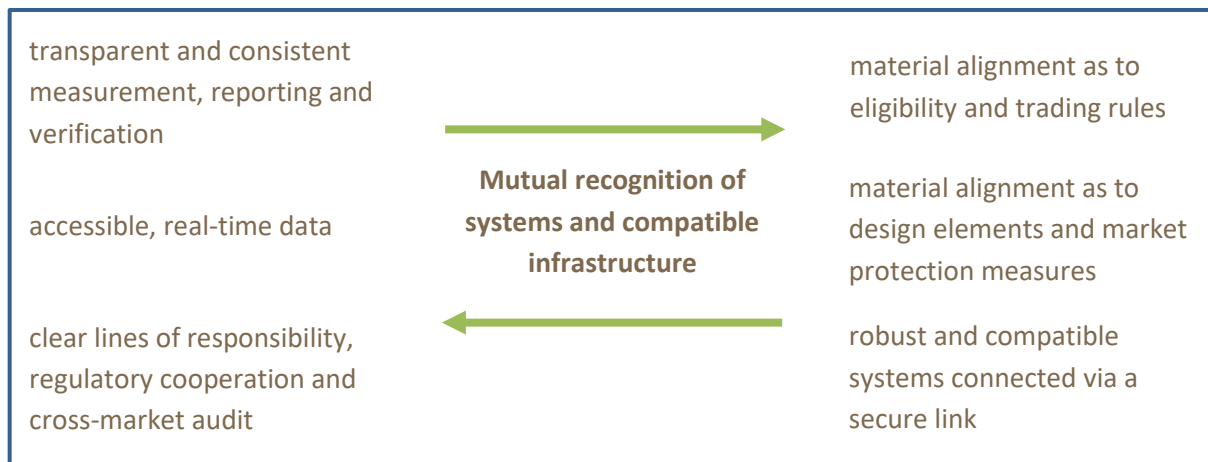
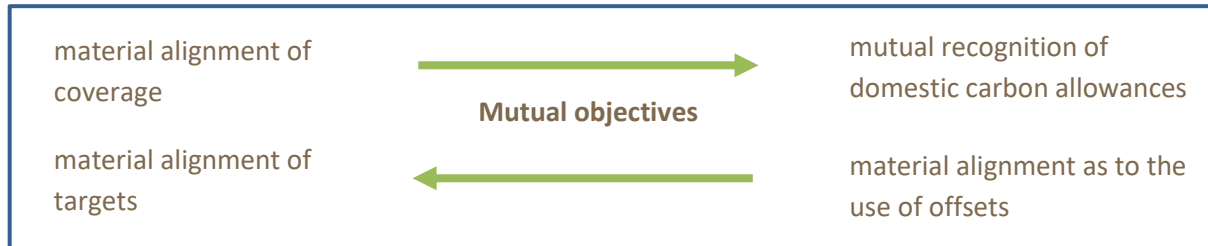
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<sup>17</sup> Greenwashing is a term used to describe a false, misleading, or untrue action or set of claims made by a person about the positive impact that a person, product, or service has on the environment. Examples of greenwashing include: (i) making environmental disclosures that are untrue, inaccurate, or unsubstantiated; (ii) market manipulation through ‘wash’ trades; or (iii) cases where an underlying climate change mitigation project does not in fact exist.





Linking markets is complicated because they require mutuality of objectives, systems and infrastructure, and mutual recognition of laws.



Mutuality is challenging because carbon markets across are still new. Linking markets also presents challenges in terms of (for example) data security, interface compatibility, official approvals, and the potential for market disruption as a result of differences between, or shocks within, the underlying markets.

### 7.6. Scaling VCMs in APAC – an important complimentary tool for CCMs

VCMs have an important role in helping to support the transition to net zero, by:

- promoting and preserving natural resources as a valuable commodity and supporting biodiversity;
- monetising the benefits of projects that avoid, mitigate, remove, reduce, or sequester emissions through the sale, purchase, and retirement of carbon credits;



- helping to connect capital with climate change mitigation projects and opportunities; and
- helping countries, corporates and individuals to realise their individual decarbonisation goals and commitments.

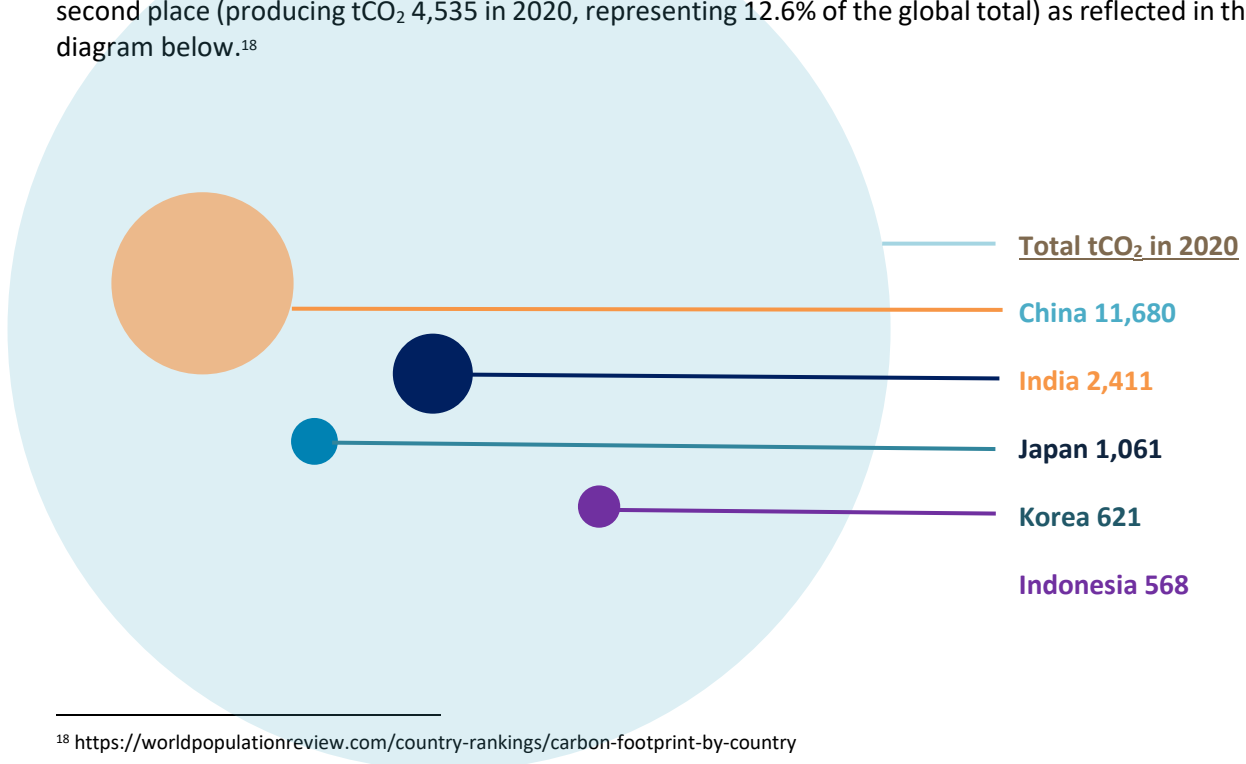
Whilst VCMs do not seek to limit the volume of emissions released into the atmosphere, they nonetheless provide a flexible mechanism for reducing and removing carbon at an accelerated rate, thereby lowering the aggregate cost of reducing net emissions. Accordingly, VCMs are an important complement to CCMs.

Irrespective of whether VCMs are ultimately positioned as:

- a transitional coverage mechanism for sectors or regions that are not covered by CCMs, carbon taxes, or other control-based mechanisms, until such time that regulated mechanisms take over;
- a long-term marketplace for carbon removals and carbon reductions to support the growth and funding of new technologies and the neutralisation of residual emissions; or
- a complementary mechanism for entities to compensate for value-chain decarbonisation, helping to channel capital where it is needed most,

the clear and consistent message from governments must be that carbon credits (which are used to offset emissions) should not be used to ‘dilute’ mandated CO<sub>2</sub>e reduction or as an alternative to CO<sub>2</sub>e reduction generally, other than to the extent necessary in hard-to-abate sectors.

Avoiding dilution of emissions reduction targets is a key issue for APAC. The region is home to half of the world’s top emitting countries. China is the world’s largest emitter of carbon dioxide (producing tCO<sub>2</sub> 11,680 metric tons CO<sub>2</sub> in 2020, representing 32% of the global total), with the United States in second place (producing tCO<sub>2</sub> 4,535 in 2020, representing 12.6% of the global total) as reflected in the diagram below.<sup>18</sup>



<sup>18</sup> <https://worldpopulationreview.com/country-rankings/carbon-footprint-by-country>



## 7.7. Anti-dilution

Whilst the focus and purpose of CCMs (emissions reduction/avoidance) might, in one sense, seem incompatible with that of VCMs (emissions offset), the two models exist together because neither one is capable of delivering net zero on their own. That said, care must be taken to ensure that the right balance is maintained and that:

- decarbonisation ambition (whether mandated or self-imposed) is not dampened;
- compliance obligations are not inadvertently diluted;
- compliance market expansion is not impeded; and
- participation in VCMs remains as open as possible.

## 7.8. The Role of Carbon Levies

As CCMs develop, governments across APAC could consider the possibility of introducing (or expanding) a levy for emitting greenhouse gases on a phased basis. Carbon levies currently feature (or are anticipated to feature) in a number of APAC jurisdictions as a non-market-based tool to monetising carbon to help:

- maintain equality in the treatment and pricing of domestic exports and foreign imports, thereby helping to soften the impact of cross border adjustment mechanisms;<sup>19</sup>
- counter the risk of carbon-leakage from other jurisdictions in which carbon-pricing schemes are already in place; and
- incentivise decarbonisation as a precursor, or as a complimentary measure, to the operation of domestic carbon markets,

including in the jurisdictions listed below. Further information relating to individual APAC jurisdictions is provided in Annex I.

**Indonesia** Initially targeted for launch in April 2022, the imposition of a carbon tax is anticipated around 2025.

**Japan** Japan's domestic carbon tax is currently JPY 289 (USD 2.16) per tCO<sub>2</sub>e. Japan will impose a carbon levy on fossil fuel importers from 2028, although the details are still under consideration.

**New Zealand** New Zealand implements a carbon levy that sets a price for the emissions of synthetic greenhouse gases (SGGs) in respect of imported goods. The SSG levy is set according to (i) the volume of SGGs embedded within imported goods and vehicles, (ii) the global warming potential of the SGGs, and (iii) the average price of New Zealand Units surrendered within the New Zealand Emissions Trading Scheme. A

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<sup>19</sup> A cross border adjustment mechanism is a tariff applied to imported goods or services that aims to reflect their carbon intensity within the overall price paid for such goods or services. It is a mechanism designed to counter carbon-leakage i.e., the relocation of carbon intensive goods or services to 'low cost' jurisdictions.





range of goods that are subject to this levy are listed in Schedule 2 of the Climate Change (Synthetic Greenhouse Gas Levies) Regulations 2013.

**Malaysia** Market commentators suggest that Malaysia may adopt a carbon tax regime similar to the regime in Singapore, pursuant to which the regulator will fix a limit on the volume of emissions, above which threshold each tCO<sub>2</sub>e will be taxed at a fixed rate. Further details are awaited.

**Singapore** The carbon tax rate, and the price of each fixed-price carbon credit, is currently set at S\$5 per tCO<sub>2</sub>e. It will rise to S\$25 in 2024 and S\$45 in 2026. The carbon tax rate is expected to reach S\$50 to S\$80 by 2030.<sup>20</sup>

In cases where domestic carbon levies exist alongside domestic carbon markets, careful consideration should be given as to how they interact. For example, in Japan a new government agency, the “GX Promotion Agency”, will be responsible for the operation of and coordination between Japan’s carbon markets and Japan’s other carbon pricing schemes.

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<sup>20</sup> Under the Carbon Pricing Act 2018 (Carbon Pricing Act), Singapore businesses from prescribed industry sectors (such as the manufacturing, power, waste and water sectors) whose CO<sub>2</sub>e emissions exceed 25,000 tCO<sub>2</sub>e per annum must pay a carbon tax on their CO<sub>2</sub>e emissions. The carbon tax is paid by the surrender of carbon credits (fixed-price carbon credits) that can currently only be purchased from the National Environment Agency. Only taxable businesses can purchase fixed-price carbon credits.



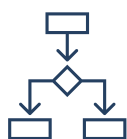
## 8. Achieving Sufficiency of Scale

### 8.1. Why Achieving Scale Matters

Carbon markets require sufficient scale to:

- generate material economic and environmental benefit; and
- transform carbon instruments into an investable and liquid asset class.

Achieving sufficiency of scale requires:



#### **standardisation**

(e.g., standardisation of definitions; measurement; allocation; disclosure; registration; transfer; and surrender)



#### **certainty**

(e.g., certainty of legal and regulatory treatment, and certainty of accounting and fiscal treatment)

### 8.2. Achieving Scale Through Standardisation

Standardisation is important because it promotes:



reduced fragmentation



streamlined trading and settlement procedures



increased transparency



increased market stability



increased interoperability



increased efficiency and reduced running costs



streamlined expansion



easier identification of harmful trading practices



greater liquidity



easier price discovery

Some key areas that would benefit from standardisation within carbon markets are those described below.

#### **Methodology**



Within VCMs, identifying and agreeing the right benchmark against which carbon credits are assessed is fundamental because it goes directly to the integrity of carbon markets, in particular how we:

- assess, measure and verify additionality<sup>21</sup> and permanence; and

<sup>21</sup> 'Additionality' is a way to assess whether a project or activity provides something new or 'additional' and has a positive impact over and above a 'business as usual' baseline scenario in which the project or activity does not exist.



- establish more transparent pricing a unit of CO<sub>2</sub>e.

Initiatives such as the Core Carbon Principles published by the Integrity Council for the VCM,<sup>22</sup> are helpful because they help to clarify the criteria for classification of carbon credits as ‘high integrity’ by reference to an umbrella standard.

Integrity benchmarking by reference to a common standard is a common feature within commodities markets (e.g., metals, green coffee, white sugar, and cocoa<sup>23</sup>) which aims to promote fungibility, helps to mitigate market fragmentation risk, and promotes competition for (and increases the price of) those assets representing ‘best-in-class’.

#### Documents



Documents relating to the issue, transfer, registration and surrender of carbon instruments should be standardised as far as possible to help reduce operating costs and increase efficiency particularly in CCMs, whilst in VCMs some flexibility may be needed as best practices develop.

#### Trading and settlement



Processes for the trading and settlement of carbon instruments should be standardised as far as possible to help minimise operating costs and increase efficiency.

The extent to which standardisation is possible is, in part, affected by the legal and regulatory classification of carbon instruments (and derivatives relating thereto). It is therefore important that jurisdictions across APAC prioritise clarifying the legal and regulatory treatment of carbon instruments to address current uncertainty.

### 8.3. Achieving Scale by Addressing Legal and Regulatory Uncertainty

Uncertainty risks inhibiting the growth of carbon markets (by limiting the extent to which key stakeholders are willing to participate, hold positions in, or manage portfolios that include, carbon instruments).

The key areas of uncertainty relating to carbon markets include issues relating to:

- the legal nature and treatment of carbon assets/instruments; and
- the regulatory classification of carbon assets/instruments.

Addressing key areas of uncertainty relating to the legal and regulatory treatment of carbon assets/instruments is important because it impacts the depth and liquidity of carbon markets i.e., the ability to package and use carbon-based assets/instruments as financial leverage.

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<sup>22</sup> The Integrity Council for the Voluntary Carbon Market is an independent governance body for VCMs. The governing board of the Integrity Council comprises 22 members from around the globe that represent all key stakeholder groups and is supported by panel of technical experts.

<sup>23</sup> Grading applies to metals traded on the London Metal Exchange and to commodities such as green coffee traded on the Intercontinental Exchange.





Key questions relate to:



how title (or ownership) is evidenced, transferred, and extinguished (upon surrender)



whether legal and beneficial title can be separated to create interests held on trust



how security can be created and enforced



the impact of insolvency



what rights of redress are available in the event of a dispute



whether trading can be regulated in the same way as securities



regulatory capital requirements

It is likely that the issue of an authoritative statement at jurisdictional level will be required to clarify the above areas of uncertainty, in particular in non-common law jurisdictions such as Mainland China.

Detailed analysis relating to the legal nature and treatment of carbon instruments is provided in Annex II.



## 9. Transparency

### 9.1. Why Transparency Matters

The success of any financial market is, in part, measured by its depth and liquidity. A financial market that is 'opaque' is inherently unstable (and therefore unsustainable) because the potential risks associated with that market are unknown and unquantifiable.

Transparency within carbon markets is critical because it underpins market confidence and price discovery and promotes interoperability.

In the absence of transparent trading and settlement procedures, and accurate records within carbon markets it can be challenging to:

- verify title to, or the attributes of, the underlying asset;
- extrapolate meaningful data;
- make accurate measurements or calculations;
- monitor trading activity and volumes;
- maintain price stability;
- ensure the proper management of large exposures, default risk and market disruption;
- safeguard against carbon leakage, double counting, or double claiming; and
- discover and manage potential conflicts of interest.<sup>24</sup>

### 9.2. Supporting Transparency

Transparency within carbon markets can be supported through:

- a transparent, centralised, and real-time registration system that can be publicly searched;
- intelligent market surveillance and data collection;
- clear rules for allocation, trading and offset of allowances;
- clear lines of regulatory responsibility;
- distributed ledger technology such as blockchain;
- standardised definitions; and
- standardised, robust and efficient trading and settlement procedures.

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<sup>24</sup> Conflicts of interest in VCMs can arise where the purchaser of carbon credits deriving from a particular industry: (i) is also the regulator of that industry; (ii) is also the project developer; (iii) is a connected party to the project developer (or otherwise has an interest in the proceeds from the sale of carbon credits); or (iv) is connected with the organisation that certifies the environmental credentials of the project. Conflicts of interest in VCMs can also arise where the verifier of the project is appointed (and paid for) by the project developer.



Increasing transparency in turn helps to:

- minimise the potential reputational risk for regulated entities being associated with ‘low integrity’ carbon credits or greenwashing;<sup>25</sup>
- minimise the potential reputational risk for regulated entities being associated with the parties that verify or certify ‘low integrity’ carbon credits or that may otherwise be involved in greenwashing;
- minimise the growing litigation risk associated with greenwashing and the legality of emissions reduction requirements;
- promote interoperability of standards to avoid market fragmentation;
- develop effective market protection measures; and
- support robust and transparent trading systems.

### 9.3. Achieving Transparency Through Tokenisation

Blockchain and other distributed ledger technologies (collectively, **DLT**) have potential to help enhance data integrity and data transparency and within carbon markets. For example, DLT may help:

**evidence control:** (and potentially ownership) of certain rights, or other interests, such as those inherent in a carbon allowance or carbon credit.

At token level there is an agreed definitive record of property which can help avoid issues such as double counting, double claiming and disputes relating to title.

**evidence transactions and facilitate trading:** such as the transfer of carbon credits from one person to another to enable the latter to meet their carbon offset requirements. The ability to trace transactions has the potential to help mitigate the risk of double counting or double claiming carbon credits (e.g., by being able to identify the underlying assets that are ‘attached’ to a particular carbon credit) as well as transactional counterparty risk.

**facilitate storage of immutable data:** of about emissions reductions and emissions removals achieved – for example, as part of the smart metering of water, gas and electricity, or satellite-based forest measurements.

**standardise:** trading procedures and protocols.

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<sup>25</sup> Greenwashing is a term used to describe a false, misleading, or untrue action or set of claims made by a person about the positive impact that a person, product, or service has on the environment. Examples of greenwashing include: (i) making environmental disclosures that are untrue, inaccurate, or unsubstantiated; (ii) market manipulation through ‘wash’ trades; or (iii) cases where an underlying climate change mitigation project does not in fact exist.





The potential benefits of tokenisation include:

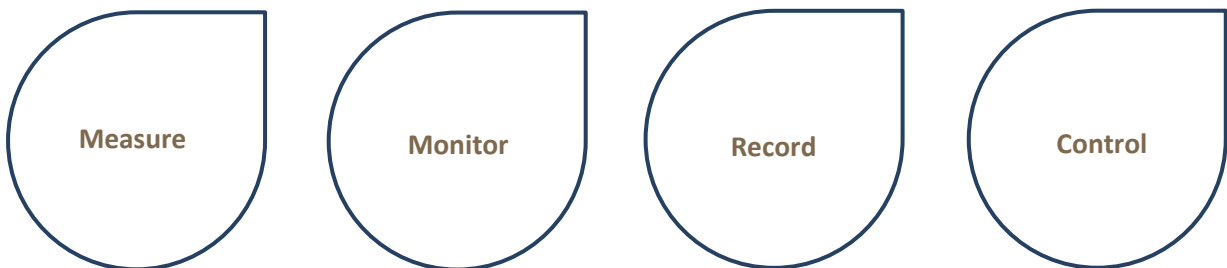
- at token level, enabling an agreed definitive record of property. This can avoid double counting, double claiming, and disputes;
- programmability. This includes the ability to control who may participate in a DLT platform and hold tokens, as well as to pre-define multiple other rules to achieve commercial and compliance objectives;
- accessibility, by enabling the fractionalisation of interests in property to enable a greater level of access to that property in a direct manner;
- at a transactional level, enabling the efficient and auditable flow of value recorded on DLT. Efficiency can be particularly enhanced when transactions are deployed with the aid of smart contracts to permit, by way of example, the pre-programmed (or ‘atomic’) trade of a digital carbon credit against a stablecoin or the automated trigger of a payment under a digital green bond; and
- liquidity, although this is highly dependent on the availability of relevant markets.

Consideration must however be given as to how DLT interfaces with wider market infrastructure, including carbon registries and exchanges, for example, any DLT solution should be designed and executed to ensure it offers the functionalities required and meets fundamental performance, scalability, security, resilience, settlement finality, and compliance objectives.



## 10. Regulation of CCMs and VCMs

### 10.1. Proportionality and Responsibility



Our ability to reduce net CO<sub>2</sub>e emissions, relies on our ability to accurately (and consistently) measure, monitor, record and control:

- the volume of CO<sub>2</sub>e generated;
- the volume of carbon allowances issued and surrendered; and
- the volume of carbon offsets used to meet compliance obligations.

When it comes to effective regulation of carbon markets, there are two core issues that must be addressed:



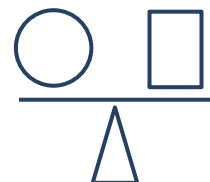
Whilst carbon markets within many APAC jurisdictions may not currently be of a size and scale to merit the cost and complexity of putting a prescriptive regulatory framework in place, there are nonetheless a number of regulatory principles used to support securities and commodities derivatives markets that can be also applied to support carbon markets and help transform carbon allowances and carbon credits into an at-scale investable asset class. It is however important for policymakers and regulators to ensure that regulatory controls within carbon markets are:



proportionate



periodically reviewed  
and updated



balanced so as not to adversely impact the  
attributes or objectives of individual markets

## 10.2. Regulation Capable of Growing and Adapting

Whilst common principles may apply to different markets, it is important to recognise that:

- carbon markets do not fit neatly within the scope of existing regulatory frameworks;
- carbon markets are decentralised, illiquid and significantly less mature than other regulated markets;
- some flexibility as regards the application of regulatory principles within carbon markets is required so as not to stifle market growth or ingenuity; and
- the regulatory classification of carbon allowances, carbon credits, and derivative transactions relating to them, varies between jurisdictions.

Whilst some jurisdictions have well-established carbon markets, others are still exploring the possibility of establishing carbon markets. For this reason, maintaining some flexibility towards the regulation of carbon markets is important. The regulatory framework applicable to individual carbon markets should be capable of growing and adapting in line with the underlying market that it regulates. In all cases however, it is essential that regulation is (i) proportionate and (ii) supports market objectives.

It is encouraging that across APAC, policymakers and regulators have adopted an ‘organic’ approach towards the regulation of carbon markets by promulgating ‘foundation’ legislation<sup>26</sup> capable of being supplemented by more detailed rules and regulations, or reformed,<sup>27</sup> as carbon markets in their respective jurisdictions develop. This is particularly true for VCMs, whose nascent state of development means they should be given more time to evolve and for best practices to be developed.

To avoid destabilisation, regulation within carbon markets (irrespective of their individual attributes or objectives) should:



be rules-based (for CCMs)



adhere to science-based principles



be pro-active (but with scope for reactionary intervention to counter or mitigate unforeseen market shocks)



follow a clear process

Noting that the structure of individual carbon markets and the regulatory frameworks operating in different jurisdictions will vary, the application of regulatory principles should be tailored accordingly.

<sup>26</sup> For example, (i) the Energy Conservation (Amendment) Act 2022 in India lays the foundation for establishing a national compliance market and a national voluntary market, and (ii) in Indonesia a framework for the establishment of carbon pricing instruments is contemplated by Presidential Regulation No. 98 of 2021 regarding the Implementation of Carbon Economic Value and Achievement of Nationally Determined Contribution Target and Control of Greenhouse Gas Emissions in the Context of National Development, dated October 29, 2021 as supplemented by implementing regulations. See Annex I for further details.

<sup>27</sup> For example, Australia’s Safeguard Mechanism was reformed with effect from 1 July 2023 following a public consultation such that covered facilities are required to reduce their emissions in line with Australia’s climate targets. See Annex I for further details.





### 10.3. Defining the Role of Regulation

Defining the role of regulators within carbon markets will become increasingly important over time, particularly in the case of CCMs. Whilst it is important to recognise that market integrity<sup>28</sup> and environmental integrity<sup>29</sup> are separate concepts (which may warrant oversight by different authorities), some regulatory principles and objectives applicable to securities or commodities derivatives markets may also (by extension) have application within carbon markets by (in particular CCMs):

- protecting market integrity through fair and equitable rules;
- enhancing transparency, traceability, and stability;
- supporting the uptake of aligned standards and processes; and
- enforcing rule-based measures to enhance market functioning (e.g., data handling, market disruption, risk management and internal audit) and protect against fraud and market manipulation.

Notwithstanding the above, the nascent state of development internationally means that VCMs should be afforded time to evolve and for best practices to develop before they are highly regulated. The regulatory principles, standards and approaches that apply to commodities should also be applied to VCMs, at this stage without additional oversight or overly prescriptive rules.

### 10.4. Key Regulatory Principles

We have identified below some key regulatory principles used to support securities and commodities derivatives markets that we suggest could also be applied to support the development of carbon markets across APAC.

These principles and ASIFMA's recommendations relating to them are set out below.

#### Market Intermediaries

Market intermediaries should be required to comply with standards of conduct that protect investor interests and ensure proper risk management.

#### **ASIFMA's Recommendations:**

Given the importance of the role of intermediaries in facilitating access to, and generating liquidity within, carbon markets (VCMs in particular):

- dealing in, advising on and facilitating the trade or settlement of carbon assets should be classified as 'regulated activities' and be subject to the relevant regulatory regime in the applicable jurisdiction;
- trading activity is integrated with a well-developed central clearing and settlement mechanism with appropriately tailored risk management processes;

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<sup>28</sup> e.g., high-functioning infrastructure that promotes transparency and integrity in financial markets.

<sup>29</sup> Namely the attributes and qualities that render a claimed emission reduction, removal, or avoidance as being real, additional, permanent, and verified.

- intermediaries should be required to satisfy minimum financial resource criteria and appoint a chief risk officer;
- intermediaries could be required to confidentially report positions and counterparty exposures to regulators; and
- There should be procedures in place for dealing with non-compliance in order to minimise damage and loss to investors and contain reputational risk. The features of individual carbon markets should however be borne in mind when considering what type of market protective measures are most appropriate in each case.

### Regulators

The responsibilities of market authorities should be clear and objectively stated. Market authorities should be operationally independent and accountable, have adequate powers and proper resources, adopt clear and consistent processes to manage risk, and ensure that conflicts of interest<sup>30</sup> are eliminated.

### **ASIFMA Recommendations:**

- The application of regulatory principles should be assessed and periodically reviewed having regard to their size, scale and maturity of the underlying carbon market bearing in mind that the nascent stage of development of VCMs internationally means they should be afforded time to evolve and for best practices to develop.
- Relevant authorities should strive to set clear lines of responsibility and cooperation between entities that are responsible for the operation of carbon markets at primary and secondary level, including environmental and financial agencies as appropriate and promoting regulatory coordination. The appropriate lines of responsibility and cooperation will vary according to the jurisdiction in which a carbon market operates.
- Trading and settlement systems (including exchanges) should be subject to regulatory oversight based on fair and equitable rules.
- Regulation should promote transparency, protect against unfair trading practices and ensure the proper management of large exposures, default risk and market disruption.
- Market authorities should develop rules for good conduct, including as regards market surveillance and market stability measures.
- Market authorities should have rules, compliance programs, sanctioning policies and powers to prohibit, detect, prevent and deter abusive practices within carbon markets, including in relation to practices that seek to distort carbon pricing.
- There should be a clear framework for conducting market surveillance and monitoring trading behaviour. Careful consideration is required as to whether measures such as position limits, position reporting or position management controls are appropriate, particularly in

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<sup>30</sup> Effective management of conflicts of interest in VCMs may, for example, require: (i) disclosure and transparency about all of the parties (directly or indirectly) connected with a carbon credit generating project; and (ii) tracking details about the holders of carbon credits through registries. We note that overly prescriptive requirements may impede the development, and impose unnecessary expense during the development phase, of VCMs. An acceptable compromise may be for spot checks and self-audit.



jurisdictions where CCMs are new. Imposing such requirements increases the compliance burden and potentially excludes smaller market participants.

- Noting the critical role that third-parties play in VCMs when verifying whether the applicable certifier’s standards have been satisfied by a climate mitigation project and the potential reputational risk (and litigation risk) for financial institutions and other regulated entities being associated with ‘low integrity’ carbon credits derived from ‘low integrity’ climate mitigation projects, third-party verifiers should be independently regulated and audited.

### **Regulatory Cooperation and Enforcement**

Market authorities should have comprehensive inspection, investigation, surveillance, and enforcement powers and implement a compliance program appropriate to their mandate.

#### **ASIFMA Recommendations:**

- The perimeter of regulation should be kept under review (according to a clear framework) as markets mature, to ensure that they have the power to address evolving trading practices that might result in a disorderly market.
- Markets authorities should have effective powers to investigate and prosecute disorderly conduct and market abuse. There should be a clear framework for the implementation of enforcement/redress procedures. Such procedures should be proportionate having regard to the underlying market’s size, liquidity, and maturity.
- Principles-based market stability mechanisms and market intervention within carbon markets<sup>31</sup> should be rules-based, (with additional scope for intervention to counter or mitigate unforeseen market shocks), and subject to periodic review.
- Regulators should have the authority to share both public and non-public information with domestic and foreign counterparts. To this end, regulators of CCMs should establish information sharing mechanisms that set out when and how they will share such information with such counterparts. Each regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and the exercise of their powers.

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<sup>31</sup> For example, the ability of exchanges to step-in and ask for an explanation if a participant is carrying a position of a certain size.





### Self-regulation

Self-regulatory organisations should be subject to the oversight of market authorities and should observe standards of fairness and confidentiality when exercising powers and delegated responsibilities.

#### **ASIFMA Recommendations:**

- As a minimum, third-party verifiers should be required to comply with minimum standards as to (by way of example) data collection and storage; data verification; fit and proper personnel; internal governance; compliance monitoring and conflicts management.
- Entities that offer analytical or evaluative services with regards to carbon markets should be subject to oversight and regulation appropriate to the impact their activities have on the market or the degree to which the regulatory system relies on them.

### Data Collection and Analysis

Market authorities should collect data relating to pricing and daily transactions on a routine and regular basis to ensure the integrity of, and to maintain transparency within, carbon markets.

#### **ASIFMA Recommendations:**

- Domestic exchanges should collect data relating to the allocation/issuance (as applicable), trading and surrender of carbon instruments to monitor trading volumes and patterns and assist with price discovery. Data collected should include details relating to pricing and daily transactions (including day-end positions) and should be publicly available in real time once markets are sufficiently liquid.
- Given the potential scale for over-the-counter trades in (or referencing) carbon instruments, we suggest that the scope of data-capture in respect of (and public availability of data relating to) over-the-counter transactions relating to carbon credits is a topic that merits open discussion.
- Automated systems, similar to those used in securities or commodities derivatives trading, could be used to help detect trading anomalies, in particular in relation to, practices that seek to distort carbon pricing.

## **10.5. Market Stability**

Market stability mechanisms<sup>32</sup> are important to the development of carbon markets, because they provide market authorities with the ability to:

- safeguard the orderly functioning of carbon markets and protect against harmful trading practices;
- mitigate pricing volatility and maintain an upward trajectory for price of emitting CO<sub>2</sub>e; and
- ensure that carbon markets can achieve their decarbonisation potential.

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<sup>32</sup> Examples include staged auctions and carbon credit volume thresholds.



Whilst the role of market stability mechanisms within nascent carbon markets will inevitably centre upon preserving their orderly functioning, the purpose of such mechanisms within more established carbon markets expands to ensure that carbon markets are ‘fit for purpose’ in terms of meeting (increasingly ambitious) decarbonisation commitments.

Established carbon markets employ a range of market protective measures, including:

- price stabilisation tools (such as price floors and ceilings) to protect against material price fluctuations and allow for the setting of maximum position limits;<sup>33</sup>
- staged auctions and volume adjustments to rebalance supply and demand and reduce price volatility without significant impact on competition;
- trading restrictions, including as regards eligibility<sup>34</sup> and trading volumes; and
- market reserves<sup>35</sup> to improve resilience to market shocks and manage market liquidity.

Market stability mechanisms are complex to implement and administer, which means that they may not be appropriate for application in jurisdictions where carbon markets are new.

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<sup>33</sup> In New Zealand, a reserve price must be met in order for New Zealand Units to be sold at auction. New Zealand also implements a “cost containment reserve” that, if triggered, allows for a greater amount of New Zealand Units to be sold at the relevant auction.

<sup>34</sup> Under the Tokyo Cap-and-Trade scheme, eligibility is limited to entities whose consumption of fuel, heat, and electricity in the previous fiscal year is  $\geq 1,500$  kl per year in terms of crude oil equivalent. See Annex I for further eligibility details.

<sup>35</sup> A market stability reserve is an adjustment mechanism that holds excess allowances in a CCM and adjusts the stock of allowances in circulation in response to supply and demand or external shocks.



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# Upscaling Carbon Markets Across APAC

*Annex I – Jurisdiction Overview*

October 2023





## Authors



*Growing Asia's Markets*

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## 1. Purpose of this Document

This document is Annex I to ASIFMA’s paper entitled “Upscaling Carbon Markets Across APAC” dated October 2023. It provides an overview of the compliance carbon markets (**CCMs**) and voluntary carbon markets (**VCMS**) currently operating in ten Asia Pacific jurisdictions and has been prepared by the leading law firms referred to herein. The jurisdictions covered by this document are Australia, Hong Kong SAR, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the People’s Republic of China<sup>1</sup> and Singapore.

Terms defined in ASIFMA’s paper entitled “Upscaling Carbon Markets Across APAC” dated October 2023 have the same meaning in this document unless a contrary indication appears.

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<sup>1</sup> In this paper, unless a contrary indication appears, references to China, Mainland China and the PRC are references to the People’s Republic of China excluding the Hong Kong Special Administrative Region, the Macau Special Administrative Region and Taiwan.



## 2. Commonwealth of Australia

*Prepared by King & Wood Mallesons, Sydney office*

### 2.1. Brief Introduction

There is no carbon market in Australia that can be definitively classified as a compliance carbon market.

As more particularly described below, the Australian Carbon Credit Units Scheme (formerly known as the Emissions Reduction Fund) (the **ACCU Scheme**) is a voluntary scheme. There is however a component of the ACCU Scheme, known as the 'Safeguard Mechanism', that imposes regulatory limits on large emitters. ACCUs can be surrendered by entities in order to meet their regulatory limits under the Safeguard Mechanism.

The Safeguard Mechanism is designed to ensure that emissions reductions secured through the ACCU Scheme are not 'cancelled out' by a rise in the volume of emissions elsewhere in the economy.

### 2.2. Paris Agreement Commitments

**2030:** to reduce emissions 43% below 2005 levels; and

**2050:** to achieve net zero emissions.

### 2.3. Compliance Market Overview

**Name of scheme:** Safeguard Mechanism (a component part of the ACCU Scheme described below).

**Year of launch:** 2016. Reformed in 2023.

**Scope of scheme:** Industrial facilities that emit more than 100,000 tCO<sub>2</sub>e in a financial year.<sup>2</sup>

Under the Safeguard Mechanism, a covered facility<sup>3</sup> is given a baseline which is the reference point against which that covered facility's net-emissions levels are assessed. Covered facilities are required to keep their net emissions below the prescribed baseline.

**Greenhouse gases:** Carbon dioxide; methane; nitrous oxide; hydrofluorocarbons; perfluorocarbons; sulphur hexafluoride; nitrogen trifluoride.

**Regulator:** Clean Energy Regulator. The scheme is administered through the National Greenhouse and Energy Reporting scheme (**NGER**).

**Principal unit traded:** Australian Carbon Credit Units (**ACCUs**) (and shortly, Safeguard Mechanism Credits (**SMCs**)).

**Exchange:** Australian Carbon Exchange. Expected to be operational in 2024.

**Allocation method:** **ACCUs:** covered facilities can purchase and surrender ACCUs to meet their compliance obligations. If a covered facility surrenders ACCUs equal to more than

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<sup>2</sup> The Clean Energy Regulator stipulates that applications for registration under the Safeguard Mechanism are due by 31 August following the financial year in which a facility first exceeds 100,000 tCO<sub>2</sub>e.

<sup>3</sup> According to a factsheet published by the Department of Climate Change, Energy, the Environment and Water in May 2023, there are around 215 covered facilities, across the mining, manufacturing, transport, oil, gas and waste sectors.  
<https://www.dceew.gov.au/sites/default/files/documents/safeguard-mechanism-reforms-factsheet-2023.pdf>





30% of its baseline they will be obliged to justify this position to the Clean Energy Regulator.

**SMCs:** Safeguard facilities may apply for tradeable SMCs to the extent that their emissions fall below their stipulated baseline. SMCs can be sold, surrendered to meet compliance obligations, or banked through to 2030.

**Trading method:** ACCUs and SMCs constitute a form of personal property and can be transferred between registry accounts by way of sale or gift (according to the commercial terms agreed between the relevant counterparties).

ACCUs and SMCs can be sold to the Government under a carbon abatement contract or by way of surrender.

**Settlement method:** According to the commercial terms agreed between the relevant counterparties. The registered holder (and legal owner) of a SMC or an ACCU is the person in whose ANREU (as defined below) account there is an entry for the SMC or ACCU.

**Licensing:** There are no licensing requirements under the Safeguard Mechanism itself (in addition to the 'scope of scheme' criteria) to participate in the Safeguard Mechanism. However see licensing requirements under voluntary scheme for dealing in ACCUs. SMCs are also a financial product under the Corporations Act 2001 (Cth) (**Corporations Act**).

**Registration:** The Australian National Registry of Emissions Units (**ANREU**) is an electronic system designed to accurately track the location and ownership of SMCs and ACCUs. A person is required to open an ANREU account to participate in the ACCU Scheme. An ACCU becomes personal property upon registration. The owner of the ANREU account is the legal owner of the SMC or ACCU and can pass good title to the SMC or ACCU to another person via the registry mechanism. The register cannot be publicly searched but the Clean Energy Regulator publishes account information with unit holdings and transaction summaries. The Clean Energy Regulator is required to publish the name and address of each person who has an ANREU account.

**Taxonomy/standards:** Not applicable to SMCs. In relation to ACCUs, refer to the 'voluntary market overview, below.

**Market protection:** SMCs will be issued to responsible emitters. However, anyone with an ANREU account can acquire and sell SMCs.

**Reporting:** In addition to keeping their net emissions below the applicable baseline, safeguard facilities must adhere to the reporting and record keeping requirements under the NGER scheme. The Clean Energy Regulator is required to publish information about all facilities covered by the Safeguard Mechanism. This publication occurs after the 1 March deadline for managing excess emissions from the prior financial year. For each covered facility, the information published includes the baseline emissions number in force for that year, total reported emissions, the responsible emitter(s) for each facility, and any ACCUs surrendered. Information is also published about any covered facilities that remain in an excess emissions situation on or after the 1 March compliance deadline.

## 2.4. Voluntary Market Overview



<b>Name of scheme:</b>	ACCU Scheme (formerly known as the Emissions Reduction Fund).
<b>Year of launch:</b>	2011.
<b>Scope of scheme:</b>	<p>Any individual or body corporate can apply to register a climate mitigation project with the Clean Energy Regulator subject to passing 'fit and proper' requirements. It is possible to participate in the ACCU Scheme as an individual, sole trader, company, government body or trust.</p> <p>A wide range of climate mitigation projects (referred to as 'methods') are capable of generating ACCUs. Eligibility criteria apply under each method.</p>
<b>Greenhouse gases:</b>	Carbon dioxide; methane; nitrous oxide; hydrofluorocarbons; perfluorocarbons; sulphur hexafluoride; nitrogen trifluoride.
<b>Regulator:</b>	Clean Energy Regulator.
<b>Principal unit traded:</b>	Australian Carbon Credit Units ( <b>ACCUs</b> ).
<b>Exchange:</b>	The Clean Energy Regulator has sought expressions of interest for the supply of exchange trading services for the wholesale and retail trading of offset units.
<b>Allocation method:</b>	ACCUs are issued to project proponents if the relevant abatement is delivered in accordance with the process under the legislation. ACCUs may be traded in the secondary market via carbon credit offtake agreements or other agreements. An entity can enter into a carbon abatement contract to sell ACCUs to the Government if it is successful at an auction.
<b>Trading method:</b>	<p>ACCUs constitute a form of personal property and can be transferred between registry accounts by way of sale or gift (according to the commercial terms agreed between the relevant counterparties).</p> <p>ACCUs can be sold to the Government under a carbon abatement contract, surrendered voluntarily to the Clean Energy Regulator, or surrendered under the Safeguard Mechanism.</p>
<b>Settlement method:</b>	According to the commercial terms agreed between the relevant counterparties. The registered holder (and legal owner) of an ACCU is the person in whose ANREU (as defined below) account there is an entry for the ACCU.
<b>Licensing:</b>	<p>There are no licensing requirements to participate in the ACCU Scheme. However, ACCUs themselves and derivatives (including over ACCUs) are financial products under the Corporations Act and there are licensing requirements under Chapter 7 of the Corporations Act that apply in respect of certain activities involving financial products.</p> <p>The most relevant licensing requirement under Chapter 7 of the Corporations Act provides that a person that carries on a financial services business in Australia is required to hold an Australian financial services licence (<b>AFSL</b>) unless an exemption applies. Financial services include providing financial product advice, dealing, making a market, operating a registered scheme, providing a custodial or depository service, providing a crowd-funding service, providing a claims handling, and settling service and providing a superannuation trustee service.</p>



If an arrangement in connection with ACCUs meets the definition of a managed investment scheme, then the operator of the scheme may be required to register the scheme with ASIC. An interest in a managed investment scheme is also a financial product for the purposes of the AFSL requirement. Carbon abatement contracts are however expressly declared not to constitute financial products.

**Registration:** The Australian National Registry of Emissions Units (**ANREU**) is an electronic system designed to accurately track the location and ownership of ACCUs. A person is required to have an ANREU account to participate in the ACCU Scheme. The owner of the ANREU account is the legal owner of the ACCU and can pass good title to the ACCU to another person via the registry mechanism. The register cannot be publicly searched but the Clean Energy Regulator publishes account information with unit holdings and transaction summaries. The Clean Energy Regulator is required to publish the name and address of each person who has an ANREU account.

**Taxonomy/standards:** Six statutory integrity standards (based on international standards) apply to the ACCU Scheme, relating to: (i) additionality; (ii) measurable and verifiable; (iii) carbon abatement; (iv) evidence based; (v) deduction of project generated emissions; and (vi) conservative approach to projections and assumptions. The Emissions Reduction Assurance Committee is an independent statutory body established to monitor compliance of methods with the six integrity standards.

**Market protection:** Foreign persons are permitted to open an ANREU account in accordance with the procedure set out by the Clean Energy Regulator. However, ACCUs must not be transferred from a ANREU account to a foreign account.

**Reporting:** At the application stage: (i) the project must give the Clean Energy Regulator a written report regarding expected reporting and crediting periods; and (ii) an offset report setting out the methodology used to determine the volume of the emissions abatement. During the lifetime of the climate mitigation project, further reporting requirements apply including notification obligations regarding reversal of carbon removal or significant changes.





### 3. Hong Kong Special Administrative Region

*Prepared by King & Wood Mallesons, Hong Kong office*

#### 3.1. Brief Introduction

Hong Kong Exchanges and Clearing Limited (**HKEX**) launched 'Core Climate' in October 2022 as a new marketplace to connect capital with climate-related products and opportunities in Hong Kong, Mainland China, and beyond.

'Core Climate' has yet to be fully developed, which means that carbon trading in Hong Kong is currently limited.

#### 3.2. Paris Agreement Commitments

Hong Kong's emissions reduction objectives fall under Mainland China's emissions reduction objectives, namely:

**2030:** peak emissions; and

**2060:** net zero emissions.

#### 3.3. Compliance Market Overview

Hong Kong does not currently operate a compliance carbon market.

#### 3.4. Voluntary Market Overviews

<b>Name of scheme:</b>	Core Climate.
<b>Year of launch:</b>	2022.
<b>Scope of scheme:</b>	To 'connect' international investors with climate-related products and opportunities in Hong Kong, Mainland China and globally. Intended to build an integrated ecosystem and international carbon market in Hong Kong, one that provides a one-stop solution for trading, custody and settlement.
<b>Greenhouse gases:</b>	To be determined by reference to the underlying climate-related products.
<b>Regulator:</b>	Core Climate is operated by HKEX. To the extent that units and derivatives constitute securities, they are regulated by the Securities and Futures Commission.
<b>Principal unit traded:</b>	Verified carbon units as certified by VERRA and other units certified according to internationally certified carbon projects from around the world.
<b>Allocation method:</b>	Enterprises and investors can source, purchase, settle and retire carbon credits through Core Climate. Units may be acquired by agreement.
<b>Trading method:</b>	Enterprises and investors can source, purchase, settle and retire carbon credits through Core Climate. Units may be traded by agreement.
<b>Settlement method:</b>	According to the commercial terms agreed between the relevant counterparties. Core Climate trades are denominated in HKD and RMB.





- Licensing:** There are no licensing requirements per se. However, to the extent that units and derivatives constitute securities, there are licensing requirements under the Securities and Futures Ordinance (Cap. 571 of the laws of Hong Kong).
- Registration:** Trades will be registered according to the underlying registry rules applicable to the units acquired/traded.
- Taxonomy/standards:** To be determined by reference to the underlying unit acquired/traded.
- Market protection:** No information currently available.
- Reporting:** To be determined by reference to the underlying unit acquired/traded.



## 4. Republic of India

*Prepared by Bharucha & Partners*

### 4.1. Brief Introduction

Whilst there are no carbon markets currently in operation in India, the country is currently developing plans to establish a compliance carbon market and a voluntary carbon market pursuant to the Energy Conservation (Amendment) Act 2022.

For the time being, India operates a variety of schemes that are designed to promote energy efficiency. These include:

- renewable energy certificates (**RECs**) that are regulated under the Central Electricity Regulatory Commission (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 (**2022 Regulations**). RECs are market-based instruments that are designed to promote renewable energy through trading on the Indian Energy Exchange Ltd. (**IEX**) or the Power Exchange of India Ltd. (**PXIL**) (**Exchanges**); and
- energy savings certificates (**ESCerts**) regulated under the Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations, 2016 (**2016 Regulations**). ESCerts are issued to domestic power plants that achieve excess energy savings and are permitted to sell such certificates on the aforementioned Exchanges through a bidding process.

Under proposals published by the Bureau of Energy Efficiency, a state agency under the Ministry of Power, it is anticipated that:

- a domestic voluntary carbon market will be introduced in 2023; and
- a domestic compliance carbon market will be established and will have its first compliance cycle in 2026.

### 4.2. Paris Agreement Commitments

**2030:** to reduce emissions 45% below 2005 levels; and

**2070:** to achieve net zero emissions.

### 4.3. Compliance Market Overview (under development)

<b>Name of scheme:</b>	Carbon Credit Trading Scheme 2023.
<b>Year of launch:</b>	Under proposals published by the Bureau of Energy Efficiency, it is anticipated that the first compliance cycle will begin in 2026.
<b>Scope of scheme:</b>	Covered entities (to be determined) will be mandated to meet prescribed emissions intensity reduction targets.
<b>Greenhouse gases:</b>	Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation and the expression greenhouse gases include, but not limited to, carbon dioxide ( <b>CO<sub>2</sub></b> ), methane ( <b>CH<sub>4</sub></b> ), nitrous oxide ( <b>N<sub>2</sub>O</b> ), hydrochlorofluorocarbons ( <b>HCFCs</b> ), hydrofluorocarbons ( <b>HFCs</b> ), perfluorocarbons ( <b>PFCs</b> ), and sulphur hexafluoride ( <b>SF<sub>6</sub></b> ).



<b>Regulator:</b>	Central Electricity Regulatory Commission.
<b>Principal unit traded:</b>	Converted carbon credit certificates ( <b>CCCs</b> ); mandatory carbon credits certificates ( <b>M-CCCs</b> ); and offset carbon credit certificates ( <b>O-CCCs</b> ).
<b>Allocation method:</b>	Anticipated that units shall be allocated through the Exchanges.
<b>Trading method:</b>	Anticipated that units shall be traded on the Exchanges.
<b>Settlement method:</b>	Anticipated to be according to the commercial terms agreed between the relevant counterparties.
<b>Licensing:</b>	Details to be determined.
<b>Registration:</b>	Covered entities will need to be registered with the Grid Controller of India Limited.
<b>Taxonomy/standards:</b>	Details to be determined.
<b>Market protection:</b>	Details to be determined.
<b>Reporting:</b>	Covered entities will be required to monitor, report, and verify their emissions. Details to be determined.

#### 4.4. Voluntary Market Overview (under development)

<b>Name of scheme:</b>	Details to be determined.
<b>Year of launch:</b>	Anticipated 2023.
<b>Scope of scheme:</b>	Details to be determined.
<b>Greenhouse gases:</b>	Details to be determined.
<b>Regulator:</b>	Bureau of Energy Efficiency ( <b>BEE</b> ).
<b>Principal unit traded:</b>	Converted carbon credit certificates ( <b>CCCs</b> ); and offset carbon credit certificates ( <b>O-CCCs</b> ).
<b>Allocation method:</b>	From 2023, the ESCert scheme and the REC scheme will be transitioned into the compliance market framework (as converted carbon credit certificates ( <b>CCCs</b> )). Offset carbon credit certificates ( <b>O-CCCs</b> ) shall be granted to non-covered entities on the basis of the projects they undertake.
<b>Trading method:</b>	Carbon credits will be traded on the two Exchanges. Anticipated that units may be traded by agreement.
<b>Settlement method:</b>	Anticipated to be according to the commercial terms agreed between the relevant counterparties.
<b>Licensing:</b>	Details to be determined.
<b>Registration:</b>	Climate mitigation projects (that are capable of generating carbon credits) will need to be registered with the BEE.
<b>Taxonomy/standards:</b>	Details to be determined.



**Market protection:** Details to be determined.

**Reporting:** Details to be determined.





## 5. Republic of Indonesia

*Prepared by SSEK Law Firm, Jakarta office*

### 5.1. Brief Introduction

Indonesia launched its long-awaited carbon exchange, IDXCarbon, on 26 September 2023. IDXCarbon is operated by PT Bursa Efek Indonesia,<sup>4</sup> which also runs the Indonesia Stock Exchange (**IDX**), under the supervision of the Financial Services Authority (*Otoritas Jasa Keuangan*) (**OJK**). IDXCarbon currently provides a platform for emissions trading and offset trading, the two types of carbon trading contemplated by Presidential Regulation No. 98 of 2021 regarding the Implementation of Carbon Economic Value and the Achievement of the Nationally Determined Contribution Target and Control of Greenhouse Gas Emissions in the Context of National Development, dated 29 October 2021 (**CEV Regulation**).

The framework for the establishment of carbon pricing instruments is contemplated by the CEV Regulation, as supplemented by, among others:

- Minister of Environment and Forestry Regulation No. 21 of 2022 regarding the Implementing Governance for Carbon Pricing, dated 20 October 2022 (**MOEF Reg 21/2022**);
- Minister of Energy and Mineral Resources Regulation No. 16 of 2022 regarding the Implementing Procedures for Carbon Pricing in the Power Plant Sub-Sector, dated 27 December 2022 (**MEMR Reg 16/2022**);
- Minister of Environment and Forestry Regulation No. 7 of 2023 regarding Carbon Trading Procedures in the Forestry Sector, dated 15 June 2023 (**MOEF Reg 7/2023**); and
- OJK Regulation No. 14 of 2023 regarding Carbon Trading Through Carbon Exchange, dated 4 August 2023 (**OJK Reg 14/2023**).

Indonesia is also developing both a compliance/mandatory market and a voluntary market, with the compliance market set to be implemented for the energy sector before it is rolled out for other sectors. Pursuant to MEMR Reg 16/2022, the Ministry of Energy and Mineral Resources plans to introduce a mandatory, intensity-based emissions trading for the energy sector.

In 2021, the government issued Law No. 7 of 2021 regarding the Harmonization of Tax Regulations, dated 29 October 2021, which provides that a carbon tax shall be imposed on carbon emissions. Initially targeted for launch in April 2022, the carbon tax has been delayed and is not expected until around 2025.

The main national registry system to administer the transfer of carbon units is the Ministry of Environment and Forestry's Climate Change Control National Registry System (*Sistem Registri Nasional Pengendalian Perubahan Iklim*) (**SRN PPI**). IDXCarbon will be interlinked with SRN PPI to streamline the transfer of carbon units and to avoid double-counting

### 5.2. Paris Agreement Commitments

**2030:** to reduce emissions 31.89% (unconditionally) and 43.2% (conditionally) below 'business as usual'; and

**2060:** net zero emissions.

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<sup>4</sup> PT Bursa Efek Indonesia (BEI) had been licensed by the OJK through OJK Decree No. KEP-77/D.04/2023, dated 18 September 2023.



### 5.3. Compliance Market Overview (under development)

<b>Name of scheme:</b>	Details to be determined.
<b>Year of launch:</b>	Anticipated to be launched in three phases between 2023 and 2030.
<b>Scope of scheme:</b>	<p>The compliance carbon market will initially be limited to coal-fired power plants that are connected to the PT Perusahaan Listrik Negara. It is expected that the compliance carbon market will expand to cover other types of power plants beginning in 2025, based on the provisions set out in MEMR Reg 16/2022:</p> <p>Phase 1 (2023 – 2024): on-grid coal fired power plants (<b>CFPPs</b>) only.</p> <p>Phase 2 (2025 – 2027): CFPPs and New and Renewable Energy (<b>NRE</b>) power plants.</p> <p>Phase 3 (2028 – 2030): CFPPs and NRE power plants.</p> <p>For Phase 1, the Ministry of Energy and Mineral Resources has issued the emissions ceiling for CFPPs for 2023, referred to as the technical approval for emissions ceiling (persetujuan teknis batas atas emisi bagi pelaku usaha or PTBAE), based on MEMR Decree No. 14.K/TL.04/MEM.L/2023.</p>
<b>Greenhouse gases:</b>	Carbon dioxide, methane, and nitrous oxide are recognised under MEMR Reg 16/2022.
<b>Regulator:</b>	On 12 January 2023, the authority of the OJK was expanded under Law No. 4 of 2023 regarding the Development and Strengthening of the Financial Sector ( <b>Law 4/2023</b> ) to include regulatory and supervisory authority over carbon trading, which includes overseeing the carbon exchange. The compliance market for the energy sector will be supervised by the Ministry of Energy and Mineral Resources.
<b>Principal unit traded:</b>	Details to be determined.
<b>Allocation method:</b>	Details to be determined.
<b>Trading method:</b>	MOEF Reg 21/2022 contemplates direct trading ( <b>B2B</b> arrangement) as well as trading through a carbon exchange, namely IDXCarbon, which is still in its initial stage. Law 4/2023 contains general for a carbon exchange ( <i>bursa karbon</i> ). <sup>5</sup> According to Law 4/2023, the exchange shall be a system that: (i) regulates carbon trading; (ii) records ownership of carbon units; (iii) develops carbon trading infrastructure; (iv) regulates state revenue from carbon trading; and (v) administers and oversees carbon trading transactions.
<b>Settlement method:</b>	Details to be determined.
<b>Licensing:</b>	Details to be determined.
<b>Registration:</b>	Details to be determined.
<b>Taxonomy/standards:</b>	Details to be determined.

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<sup>5</sup> MOEF Reg 21/2022 Article 27; CEV Regulation, Article 54.



**Market protection:** Details to be determined.

**Reporting:** Details to be determined.

#### 5.4. Voluntary Market Overview (under development)

**Name of scheme:** IDXCarbon for trading through carbon exchange.

**Year of launch:** 2023.

**Scope of scheme:** Any enterprise holding emissions reduction certificates (*sertifikat pengurangan emisi gas emisi rumah kaca*) (**SPE-GRK**) and/or technical approval for emissions ceiling for business actors (*persetujuan teknis batas atas emisi bagi pelaku usaha*) (**PTBAE-PU**). It is expected that to participate in the voluntary carbon market, an entity will need to register and open an account with SRN PPI (a unique code will be issued)<sup>6</sup> and provide its emissions profile information.

**Greenhouse gases:** The definition of carbon trading under the CEV Regulation is limited to the sale and purchase of ‘carbon units’ (defined as proof of ownership in the form of a certificate expressed in one tonne of carbon dioxide and registered at SRN PPI).<sup>7</sup> Based on this definition, it appears that carbon dioxide is the only greenhouse gas that is contemplated to be covered by the voluntary carbon market. It is however anticipated that other greenhouse gases will be included, subject to the mutual recognition mechanism as prescribed by the MOEF. We note that the CEV Regulation currently recognises methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride as greenhouse gas emissions.<sup>8</sup>

**Regulator:** Directorate General of Climate Change Control (**DGCCC**) at the MOEF, and the OJK and IDX in the context of IDXCarbon implementation.

**Principal unit traded:** SPE-GRK (for offset trading) and PTBAE-PU (for emissions trading). The rules for the creation, registration, and transfer of SPE-GRK are set out in MOEF Reg 21/2022.<sup>9</sup> The rules concerning PTBAE-PU depend on the sectoral ministry overseeing the particular sector.

The project sectors listed in the CEV Regulation as being capable of generating carbon credits include energy, waste, industrial process and product usage (**IPPU**), agriculture forestry and other land usage (**AFOLU**), and/or such other sectors as may be applicable with the development of science and technology.<sup>10</sup>

The following conditions must be met for the issuance of SPE-GRK:

- the emissions reduction must be real, permanent, measurable, monitored and reported;
- the emissions reduction must derive from climate change mitigation actions;

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<sup>6</sup> MOEF Reg 21/2022, Article 67.

<sup>7</sup> CEV Regulation, Article 1 Number 17. Under Law 4/2023, carbon units are classified for regulatory purposes as ‘securities’ (*efek*).

<sup>8</sup> CEV Regulation, Article 10(7).

<sup>9</sup> As carbon markets are not yet operational in Indonesia, this paper does not look at any trading rules in detail.

<sup>10</sup> CEV Regulation, Article 7(2).





- the emissions reduction must not have been registered under any other scheme; and
- the emissions reduction must be transparent, accurate, consistent, comprehensive, and comparable.

In addition, the underlying project that generates the SPE-GRK must:

- be located in Indonesia;
- be registered with SRN PPI;
- be in accordance with the provisions of (i) applicable guidelines issued by the Intergovernmental Panel on Climate Change; (ii) applicable international standards or Indonesian national standards; and (iii) applicable laws and regulations;
- apply a methodology (i) determined by the Director General of Climate Change Control at the MOEF; (ii) determined by the National Standardization Body<sup>11</sup>; and/or (iii) approved by the United Nations Framework Convention on Climate Change (**UNFCCC**);
- have undergone public consultation; and
- contribute to sustainable development.

Neither the CEV Regulation nor the regulation that implements it, i.e., MOEF Reg 21/2022, imposes any age limit or vintage year in respect of the underlying project that generates carbon credits. According to a recent MOEF decree, an agreement for the sale and purchase of carbon credits cannot exceed a term of five years. It remains to be determined if such provision is intended to be temporary or permanent.

It is possible that other types of carbon credit (such as VERRA, Gold Standard, or Plan Vivo) may be traded within the voluntary carbon market in due course, subject to the satisfaction of the mutual recognition requirements prescribed by the MOEF. At the time of this writing, the Indonesian government has not entered into any formal mutual recognition agreement. Accordingly, whether any future standards outside SRN-PPI will be acceptable on IDXCarbon.

**Allocation method:** Anticipated that units may be acquired by agreement. Nevertheless, MOEF Reg 7/2023 provides a formula to calculate the quota of carbon units generated from the AFOLU sector that will be transferred overseas.<sup>12</sup>

**Trading method:** Article 54 of the CEV Regulation contemplates carbon trading either through a carbon exchange (IDXCarbon) or by direct trade (B2B). It is anticipated that for the B2B arrangement, units may be traded by agreement. For carbon trading on IDXCarbon, according to internal regulations and decrees of the Indonesia Stock

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<sup>11</sup> Neither MOEF Reg 21/2022 nor the CEV Regulation explain what is meant by or which party has been designated as the National Standardization Body.

<sup>12</sup> MOEF Reg 7/2023, Appendix.





Exchange, IDXCarbon will feature the following four market features for the implementation of carbon trading:

- (i) **Auction market:** where the relevant ministry or emission mitigation project owner can sell carbon units through an auction mechanism and prospective buyers can submit purchase requests at the desired volume and price (for PTBAE-PU and SPE-GRK).
- (ii) **Regular market:** where all parties (sellers and buyers) can submit their sale and purchase offers for carbon units in real time during trading hours (for PTBAE-PU and SPE-GRK).
- (iii) **Negotiated market:** where sellers and buyers can agree to sell and purchase at a pre-negotiated price (for PTBAE-PU and SPEGRK).
- (iv) **Non-regular market:** where project owners can submit a sale offer for carbon units and buyers may confirm such purchase or counter with a different price offer (for SPE GRK).

PTBAE-PU can be traded in the auction market, regular market and negotiated market, while SPE-GRK can be traded in all markets.

- Settlement method:** Anticipated to be according to the commercial terms agreed between the relevant counterparties.
- Licensing:** It is a prerequisite for the issuance of SPE-GRK that the application documents<sup>13</sup> be independently validated and verified.<sup>14 15</sup>
- Registration:** An emissions reduction project must be registered SRN PPI.
- Taxonomy/standards:** SPE-GRK is a government-issued certified emissions reduction unit which derives from a project that has been verified by SRN PPI. SRN PPI is managed by the DGCCC at the MOEF..
- Market protection:** It is anticipated that carbon credit trading will be subject to a buffer requirement (by which a certain percentage of carbon credits will be allocated as a buffer amount in an effort to achieve Indonesia’s NDC target) and a benefit sharing obligation (by which proceeds may be divided with the government), subject to further implementing regulations.
- Reporting:** To be eligible to participate in the voluntary carbon market, an entity must report its emissions profile to SRN PPI.

<sup>13</sup> The application documents include a Mitigations Action Design Document (*Dokumen Rancangan Aksi Mitigasi*) (**DRAM**).

<sup>14</sup> MOEF Reg 21/2022, Article 61(3), explains that the issuance of SPE-GRK shall follow this sequence: (a) registration with the SRN PPI; (b) preparation and planning of DRAM documents; (c) validation of DRAM documents; (d) execution and implementation of climate change mitigation actions/project implementation; (e) verification of the project implementation; and (f) issuance of SPE-GRKs and registration at SRN PPI.

<sup>15</sup> Under Article 1 Numbers 37 and 38 of MOEF Reg 21/2022, ‘verifiers’ are independent third parties that have been certified by a verification agency accredited by the National Accreditation Committee (*Komite Akreditasi Nasional*) to verify the implementation of carbon economic value, while ‘validators’ are independent third parties that been certified by validation agencies accredited by the National Accreditation Committee to validate the implementation of carbon economic value.



## 6. Japan

*Prepared by King & Wood Mallesons, Tokyo office*

### 6.1. Brief Introduction

At national level, Japan's J-Credit scheme is domestically classified as a compliance carbon market. At metropolitan level, the Tokyo-Cap-and-Trade scheme and the Saitama Prefecture<sup>16</sup> scheme are also domestically classified as compliance carbon markets. The Tokyo Cap-and-Trade scheme introduced mandatory targets for emissions reduction for large-scale energy consumers.

In February 2022, the Ministry of Economy, Trade and Industry (**METI**) announced the establishment of the Green Transformation League (**GX League**). In February 2023, the Japanese government announced a ten-year plan (**GX Basic Plan**) in relation to carbon pricing which includes proposals for the GX League to transition into a national compliance carbon market from 2026 (with auctioning being introduced from 2033). The Japanese government is currently working on the trading rules for the GX League. The GX League is scheduled to begin full-scale operations in the 2023/2024 fiscal year.

There is currently no national voluntary carbon market operating in Japan.<sup>17</sup>

Japan will impose a carbon levy on fossil fuel importers from 2028. The details are still under consideration but will be determined by reference to other carbon pricing policies such as the country's carbon tax which is currently JPY 289 (USD 2.16) per tCO<sub>2</sub>e. A new government agency, the "GX Promotion Agency", will be responsible for the operation of and coordination between Japan's carbon markets and Japan's other carbon pricing schemes.

Japan also operates a voluntary 'Support for High-efficiency Installations for Facilities with Targets' (**SHIFT**) Program, pursuant to which participating entities set an emissions reduction target and propose new technologies to achieve them. Under the SHIFT scheme:

- entities that implement emissions reducing / avoiding technologies and achieve their emissions reduction target are granted a subsidy equal to one-third of the cost of the technology; and
- entities that are unable to meet their emissions reduction target can purchase J-Credits from other participating entities.

### 6.2. Paris Agreement Commitments

**2030:** 50% reduction of emissions from 2013 levels; and

**2050:** net zero emissions.

### 6.3. Compliance Market Overview

**Name of scheme:** J-Credit scheme.

**Year of launch:** 2013.

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<sup>16</sup> Saitama Prefecture is a part of the greater Tokyo area and operates its own emissions reduction scheme. Given its modest size and scale however, this paper does not consider the Saitama Prefecture scheme in any detail. Saitama credits are also traded under the Tokyo Cap-and-Trade scheme.

<sup>17</sup> Whilst there is a voluntary scheme (known as the J-Blue Credit scheme) that is operated by the Japan Blue Economy Association. The Japan Blue Economy Association is an association approved by the Ministry of Land, Infrastructure, Transport and Tourism, but is not affiliated with the government.



**Scope of scheme:** The J-Credit scheme was created by expanding Japan's verified emissions reduction or J-VER scheme, which was in operation from 2008 to 2012. The scheme generates J-Credits through energy saving, renewable energy, and domestic forest management activities. From 22 September 2022 to 31 January 2023, J-Credits were traded on the Tokyo Stock Exchange on a trial basis in preparation for the operational phase of the GX League.

The credits created by the J-Credit scheme can be used for various purposes, such as achieving the goals of the Japan Business Federation's "Commitment to a Low Carbon Society" and for carbon offsetting, and they can be used to advertise emission reduction activities. However, they cannot be used for the purpose of obtaining emission allowances, as explained below in relation to the Tokyo Cap-and-Trade scheme.

**Greenhouse gases:** Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, perfluorocarbons, and nitrogen trifluoride.

**Regulator:** The central Japanese government through the Ministry of the Environment, and Ministry of Agriculture, Forestry and Fisheries.

**Principal unit traded:** A summary of the different units traded under the J-Credit scheme is set out in the table below.

Name of unit	Description
Renewable energy (electric power) credit	emissions are reduced by replacing fossil fuels with renewable energy.
Renewable energy (thermal) credit	emissions are reduced by replacing fossil fuels with renewable energy sources.
Energy saving credits	emissions are reduced by installing energy-saving equipment (boilers and lighting equipment) for fuel conversion and higher efficiency.
Forest credits	emissions are absorbed through forest management.
Industrial credits	emissions are reduced by chemical or physical changes in industrial processes.
Agriculture credits	emissions are reduced through the agricultural sector.
Waste credits	emissions are reduced by improving waste disposal methods.

**Allocation method:** The Japanese government certifies the volume of emissions reduced, avoided, or sequestered by a project and issues a corresponding volume of J-Credits.

**Trading method:** J-Credits may be traded as follows:





- direct purchase from credit holders. Participants must open a J-Credit account in order to conduct trading activity. There are no restrictions on who may open a J-Credit account, but trading is generally undertaken by domestic corporates;
- purchase through auction conducted by the J-Credit scheme Secretariat. Participants must: (i) open a J-Credit account and (ii) use the credits for the purposes expressly approved under the J-Credit scheme. Participants may also purchase credits with the intention of reselling them to other participants; or
- purchase through a broker. The broker must open a J-Credit account. There are no restrictions on who may trade via a broker other than any rules that the broker may prescribe.

There are no express restrictions on foreign participation. However, account opening, and registration documents are all written in Japanese.

**Settlement method:** According to the commercial terms agreed between the relevant counterparties.

**Licensing:** In order for a project to generate J-Credits, an emission reduction plan must be prepared, submitted to the review organization for registration, and registered.

**Registration:** A centralised register is maintained by the government.

**Taxonomy/standards:** Activities that meet the following requirements will be registered:

- the project must be located in Japan;
- the project is less than two years old at the point of registration;
- the project has not been previously registered under any scheme;
- the project must add additionality over a 'business as usual' base case; and
- the project complies with the certification methodology (third party verification must be obtained).

**Market protection:** Details to be determined.

**Reporting:** The volume of emissions removed/reduced must be surveyed and reported to a certification authority.

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**Name of scheme:** Tokyo Cap-and-Trade scheme.

**Year of launch:** 2010.

**Scope of scheme:** Under the Tokyo Cap-and-Trade scheme the Tokyo Metropolitan Government introduced mandatory targets for emissions reduction for large-scale energy consumers. Those covered entities that do not meet their emissions reduction targets can purchase credits from other participating entities that have.

**Greenhouse gases:** Carbon dioxide emitted from the use of fuel, heat, and electricity.





**Regulator:** Tokyo Metropolitan Government.

**Principal unit traded:** A summary of the different units traded under the Tokyo Cap-and-Trade scheme is set out in the table below. Credits must be used to reduce ‘own’ emissions.

Name of unit	Description
Excess emission reductions	Excess credits available from participating entities that have exceeded their emissions reduction targets.
Small and mid-size facility credits	Emissions reductions achieved through measures based on certification standards for small and medium-sized facilities in Tokyo.
Renewable energy credits	Credits generated via renewable energy.
Outside Tokyo credits	Emissions reductions achieved through energy efficiency measures by large facilities outside Tokyo.
Saitama credits	Excess credits available from entities participating in the emissions reduction scheme operated by the Saitama Prefecture. <sup>18</sup>

**Allocation method:** Units are allocated to the extent that an entity exceeds its emissions reduction obligations.

**Trading method:** The following relates to trading ‘excess emission reductions’ (which is the most frequently traded credit type).

Participants must open a trading account. The following persons are eligible to apply for a trading account:

- businesses established in Tokyo that consume more than the prescribed threshold of fuel, heat, and electricity in a fiscal year;
- corporations (excluding foreign corporations that do not have an office, business office, etc. in Japan); and
- individuals or corporations that are expressly designated by the Tokyo Metropolitan Government.

**Settlement method:** According to the commercial terms agreed between the relevant counterparties.

**Licensing:** There is no licensing requirement.

**Registration:** A register is maintained by the Tokyo Metropolitan Government.

<sup>18</sup> The Saitama Prefecture operates its own emissions reduction scheme. Given its modest size and scale however, this paper does not consider the Saitama Prefecture scheme in any detail. Saitama credits are also traded under the Tokyo Cap-and-Trade scheme.



**Taxonomy/standards:** See 'Principal unit traded' section above.

**Market protection:** Only entities whose consumption of fuel, heat, and electricity in the previous fiscal year is  $\geq 1,500$  kl per year in terms of crude oil equivalent are eligible to participate.

**Reporting:** The volume of emissions removed/reduced must be surveyed and reported to a certification authority.

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**Name of scheme:** Green Transformation League (**GX League**)

**Year of launch:** Not yet operational.

**Scope of scheme:** The GX League accepted applications from companies which has interested in participating in emissions trading until April 28, 2023. Going forward, these companies will establish their emissions reduction goals for the current fiscal year and actively work towards lowering their emissions. From the next fiscal year, trades based on actual emissions reductions will take place among the participating companies which the applications were accepted before April 28, 2023. It's important to note that since the trading will not commence until next fiscal year, there is no market in place for these transactions yet, and preparations are still ongoing.

**Greenhouse gases:** Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, perfluorocarbons, and nitrogen trifluoride.

**Regulator:** The central Japanese government through the Ministry of the Environment, and Ministry of Agriculture, Forestry and Fisheries.

**Principal unit traded:** The GX League is expected to trade domestic carbon credits and foreign carbon credits generated under the Joint Crediting Mechanism (**JCM**) scheme. The JCM scheme is a bilateral carbon offset mechanism designed to incentivise leading decarbonisation technologies in 25 partner countries.<sup>19</sup> The GX Basic Plan outlines proposals to expand the JCM scheme beyond the current 25 partner countries through the implementation of large-scale decarbonisation projects, including carbon capture and storage projects.

**Allocation method:** Applications are accepted prior to 28 April in the year preceding the compliance cycle.

**Trading method:** As trading in respect of applications received by 28 April 2023 will only be traded during the 2024 fiscal year, preparations for trading are still ongoing and further details are awaited.

**Settlement method:** As trading in respect of applications received by 28 April 2023 will only be traded during the 2024 fiscal year, preparations for trading are still ongoing and further details are awaited.

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<sup>19</sup> The 25 countries comprise: Mongolia, Bangladesh, Kenya, Ethiopia, the Republic of Indonesia, Vietnam, Lao PDR, Cambodia, Maldives, Palau, Costa Rica, Mexico, Chile, Saudi Arabia, Myanmar, Thailand, the Philippines, Senegal, Tunisia, Azerbaijan, Moldova, Georgia, Sri Lanka, Uzbekistan, and Papua New Guinea.



- Licensing:** There is no licensing requirement.
- Registration:** A register is maintained by the GX League Office.
- Taxonomy/standards:** Details to be determined.
- Market protection:** Details to be determined.
- Reporting:** The volume of emissions removed/reduced must be surveyed and reported to a certification authority.



## 7. Republic of Korea

*Prepared by Kim & Chang, Seoul office*

### 7.1. Brief Introduction

The Korean Emissions Trading Scheme (**K-ETS**) is East Asia's first compliance carbon market. The total trading volume of allowances in 2020 was 44 million tons (seven times the trading volume in 2015, which was 5.66 million tons) representing an aggregate value of KRW 1.3 trillion, (21 times the aggregate value in 2015, which was KRW 62.4 billion).

At the end of 2022, the Ministry of Environment announced its plan to improve the K-ETS. Under the improvement plan, the Ministry of Environment intends to, among other things: (i) minimize certain administrative procedures in order to encourage companies to make efforts to reduce greenhouse gases in alignment with the country's Paris Agreement commitments; (ii) increase the share of auctioning as a pre-emptive response to upcoming trade requirements (e.g., the EU carbon border adjustment mechanism); and (iii) recognise carbon emission reductions in cases where companies manufacture products by using low-carbon raw materials or use electricity generated from renewable energy.

Whilst international carbon credits may be traded in Korea, there is no domestic voluntary carbon market currently operating in Korea. The Korean Chamber of Commerce and Industry (**KCCI**) has however announced the establishment of a carbon reduction certification centre and has also prepared a set of draft carbon reduction certification standards. According to a local news article:

- the draft certification standards benchmark the Clean Development Mechanism, Verra, and Gold Standard;
- the KCCI is currently in the process of gathering opinions from various stakeholders; and
- the first domestic carbon credit exchange will open in the second half of 2023.

### 7.2. Paris Agreement Commitments

**2030:** reduce emissions to 40% below 2018 levels; and

**2050:** net zero emissions.

### 7.3. Compliance Market Overview

**Name of scheme:** Korean Emissions Trading Scheme (**K-ETS**).

**Year of launch:** 2015.<sup>20</sup>

**Scope of scheme:** **Phase 1 (2015 – 2017):** 23 sub-sectors from the following five sectors: power, industry (e.g., iron and steel, petrochemicals, cement, oil refining, nonferrous metals, paper, textiles, machinery, mining, glass, and ceramics), buildings, waste, and transportation (domestic aviation).

**Phase 2 (2018 – 2020):** the public and waste sectors were disaggregated such that the K-ETS covered the following six sectors: heat and power,

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<sup>20</sup> The Act on Allocation and Trading of Greenhouse Gas Emission Permits served as the legal basis for establishing the K-ETS. It was enacted in May 2012 and the K-ETS became effective in January 2015.





industry, buildings, transportation, waste, and the public sector. These were divided into 62 sub-sectors.

**Phase 3 (2021 – 2025):** Coverage within the transport sector was widened to include freight, rail, passenger, and shipping. Construction industries have also been brought into the system’s scope. This increased the number of sub-sectors to 69.

684 entities were covered by the K-ETS at the start of Phase 3.

The following entities may participate in the K-ETS:

- an entity that is designated as a **business entity eligible for allocation** i.e., a company that (i) falls under 69 business types in 6 sectors (conversion, industry, transportation, buildings, wastes, and public and others) and (ii) emits an average of 125,000 tons or more of greenhouse gases per year for 3 consecutive years or operates a place of business emitting 25,000 tons or more of greenhouse gases;
- an entity that obtains carbon offset credits through external projects (referred to as an **external business entity**);
- seven public and private financial institutions (also known as **market makers**), which are the Korea Development Bank, Industrial Bank of Korea, Hana Financial Investment, Korea Investment & Securities Co., Ltd., SK Securities, KB Securities, and Shinhan Investment Corp;
- emission permit brokers (financial institutions designated by the government)<sup>21</sup>; and
- the government of Korea (in the case of paid allocation of emission permits).

In order for a foreign entity to participate in the K-ETS, such foreign entity must establish a Korean domestic entity, which needs to become a *business entity eligible for allocation, an external business entity, a market maker, or an emission permit broker*.

<b>Greenhouse gases:</b>	Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.
<b>Regulator:</b>	The Ministry of Environment has overall responsibility for the K-ETS.
<b>Principal unit traded:</b>	There are three types of emission permits that may be traded on the Korea Exchange: Korean Allowance Units ( <b>KAUs</b> ), Korean Offset Credits ( <b>KOCs</b> ), and Korean Credit Units ( <b>KCUs</b> ). Entities must surrender KAUs and KCUs for the previous emissions year by the end of June.

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<sup>21</sup> Non-compliance entities in the form of other non-market maker domestic financial intermediaries can participate in the secondary market and trade allowances as well as converted carbon offsets on the Korea Exchange (KRX). 20 financial intermediaries were approved for participation in the carbon market from 2021 (the total as of February 2023 is 21 financial intermediaries). Though, they initially could only hold up to 200,000 allowances each, to avoid excessive market share, this number was increased to 500,000 in December 2022. As at the beginning of 2023, there are seven K-ETS market makers. These institutions can draw on a government-held reserve of 20 million allowances in a bid to increase market liquidity.



<b>Allocation method:</b>	<p>The Korea Exchange (<b>KRX</b>) is the trading and settlement platform for the K-ETS. The following arrangements apply during Phase 3.</p> <p><b>Free allocation:</b> Less than 90% of free allocation to entities in sub-sectors that are subject to auctioning. 100% for Emission-Intensive and Trade-Exposed (<b>EITE</b>) sectors subject to certain criteria.</p> <p><b>Auctioning:</b> At least 10% of allocation to entities in sub-sectors subject to auctioning. Entities from 41 sub-sectors, excluding EITE sectors, can participate in auctions. Participation in auctions is subject to some limitations. Only companies that do not receive all their allowances for free are eligible to bid, with a list of eligible bidders published by the Ministry of Environment. Bidders can purchase 15-30% of the allowances on offer. The auctions are subject to a minimum price. The government is expected to increase the share of auctioned allowances in the near to medium term.</p> <p>Korean Offset Credits (<b>KOCs</b>) and international carbon credits (subject to qualitative criteria) may be applied to offset up to 5% of an entity's compliance obligations. KOCs and international carbon credits must be converted into KCUs for compliance use. Conversion of KOCs must occur within two years of KOC issuance.</p>
<b>Trading method:</b>	<p><b>Primary:</b> monthly auctions began in 2019. Sectors that receive 100% free allocation are not permitted to participate in auctions. Auctions take place via the KRX.</p> <p><b>Secondary:</b> over the counter and spot trades.</p>
<b>Settlement method:</b>	<p>The payment for emission permits must be made on the date of purchase.</p>
<b>Licensing:</b>	<p>To the extent that carbon credits are deemed to be over-the-counter derivatives regulated under the Financial Investment Services and Capital Market Act (<b>FSCMA</b>), then transactions relating to such carbon credits may be subject to the documentation and disclosure obligations prescribed by the FSCMA. Carbon credits are not currently however classified as financial products, nor have their legal characteristics been prescribed by Korean laws or regulations.</p>
<b>Registration:</b>	<p>The Greenhouse Gas Inventory and Research Center (<b>GIR</b>) is responsible for the registry and technical implementation.</p>
<b>Taxonomy/standards:</b>	<p>KAUs are credits issued and allocated to the participants of the K-ETS by the government to achieve certain emissions targets.</p> <p>KOCs are credits converted or generated from “external projects” in accordance with the Emissions Trading Act and can be traded on the Korea Exchange or off the market. KCUs are credits that are converted from KOCs and held by the participants of the K-ETS.</p>
<b>Market protection:</b>	<p>Whilst KAUs are not regulated under financial market law, for the purpose of preventing market price manipulation, unfair trade and to regulate</p>



exchange of information, Article 22, paragraph 3 of the Emissions Trading Act specifies that certain provisions of the Capital Market and Financial Investment Business Act apply.

Stabilisation measures include:

- additional auctioning of up to 25% of allowances from the market stabilization reserve, which contains 14.3 million allowances;
- the establishment of a limit to the number of allowances entities can hold (minimum (70%) or maximum (150%) of the allowances of the compliance year);
- an increase or decrease of the offset limit; and
- temporary price ceiling or price floor.

**Reporting:**

Annual reporting of emissions from the previous year must be submitted by 31 March. Emissions reports are reviewed and certified by the Certification Committee of the Ministry of Environment by the end of May. Emissions must be verified by a third-party verifier. If an entity fails to report its emissions correctly, then such entity is required to make the necessary revisions.

#### **7.4. Voluntary Carbon Markets**

Whilst international offsets may be traded in Korea, there is currently no domestic voluntary carbon market in Korea.





## 8. Malaysia

*Prepared by Wong & Partners, Kuala Lumpur office*

### 8.1. Brief Introduction

In September 2021, the Ministry of Environment and Water (**KASA**) announced that a domestic compliance carbon market was being developed.

Since 2021, the Malaysian government has been engaging with governments and corporates with the aim of aligning relevant policies and regulation. As part of this process, the Ministry of Natural Resources, Environment, and Climate Change has commenced a study under the 12th Malaysia Plan in order to develop a policy and design framework for a domestic compliance carbon market, looking into a carbon tax system compliance carbon market design frameworks, registration, and alignment with international standards.

As of July 2023, the Ministry of Finance in collaboration with World Bank commenced a feasibility study in relation to the potential implementation of a carbon pricing instrument. The study is anticipated to complete in 2025. Additionally in August 2023, the Minister of Economy launched Malaysia's National Energy Transition Roadmap, reflecting Malaysia's commitment to accelerate its energy transition and ultimately achieve Malaysia's net-zero GHG emissions aspirations.

Market commentators suggest that Malaysia may adopt a carbon tax regime similar to Singapore, pursuant to which the regulator will fix a limit on the volume of emissions, above which threshold each tCO<sub>2</sub>e will be taxed at a fixed rate. Further details are awaited.

For the time being, Malaysia operates a voluntary carbon market as more particularly described below.

### 8.2. Paris Agreement Commitments

**2030:** reduce emissions by 45% compared to 2005 levels; and

**2050:** net zero emissions.<sup>22</sup>

### 8.3. Compliance Market Overview

Malaysia does not currently operate a compliance carbon market.

### 8.4. Voluntary Market Overview

**Name of scheme:** Bursa Carbon Exchange.

**Year of launch:** 2022. The inaugural issue of carbon credits took place on 16 March 2023. On 25 September 2023, Bursa Carbon Exchange commenced trading and facilitation of off-market transactions of carbon credits.

**Scope of scheme:** To allow for the trading of carbon credits under standardised carbon contracts. Bursa Carbon Exchange is the world's first Shariah-compliant carbon exchange.

The Bursa Carbon Exchange does not restrict sales of carbon credits generated from Malaysian projects to foreigners. The standardised carbon contracts that are traded on the Bursa Carbon Exchange are denominated in the Malaysian Ringgit. The

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<sup>22</sup> 2050 net zero emissions is not an official Paris Agreement commitment. However, during a Prime Ministerial speech in 2021, it was announced that Malaysia is targeting net zero emissions by 2050.





Malaysian Ringgit is however a non-internationalised currency and exchange control requirements will need to be adhered to by such investors.

Bursa Carbon Exchange has prescribed certain eligibility criteria for participants in its BCX Rules, which include amongst others, that the participant shall:

- not be an individual (being a natural person);
- be duly organised and validly existing under the laws of its jurisdiction;
- nominate at least one designated user;
- pass all know-your-customer and anti-money laundering, anti-bribery, anti-corruption and countering financing terrorism requirements due diligence and checks against any sanctions lists undertaken by the BCX operator;
- be of good standing, reputation and integrity and not convicted or been convicted of any offence involving fraud or dishonesty;
- maintain adequate financial resources, operate as a going concern and not be insolvent or the subject of insolvency proceedings; and
- in the reasonable opinion of the Operator, not pose an actual or potential threat to the security of the System, the Operator, or to another participant's business.

Apart from these general eligibility requirements, Bursa Carbon Exchange also imposes specified requirements on various market participants, depending on the type of participant.

Bursa Carbon Exchange does not restrict sales of carbon credits generated from Malaysian projects to foreigners. The standardised carbon contracts that are traded on the BCX are denominated in the Malaysian Ringgit. The Malaysian Ringgit is however a non-internationalised currency and exchange control requirements will need to be adhered to by such investors.

**Greenhouse gases:** Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, perfluorocarbons, and nitrogen trifluoride.

**Regulator:** The Ministry of Natural Resources, Environment and Climate Change (**NRECC**) is responsible for overseeing the implementation of national climate policy, including domestic carbon market mechanisms.

The Ministry of Finance is jointly responsible with the NRECC and the Bursa Carbon Exchange for the domestic voluntary carbon market.

The regulatory framework for the operation of the Bursa Carbon Exchange is set out under the National Guidance on Voluntary Carbon Market Mechanisms (2021).

**Principal unit traded:** Verified carbon units as certified by VERRA, having a vintage of 2016 or later.

**Exchange:** Bursa Carbon Exchange (**BCX**).



**Allocation method:** Buy and Sell orders are matched through the system. Minimum order of 1 unit. Carbon credits may also be sold and allocated via auctions.

**Trading method:** Carbon credits may be purchased (on a spot trade basis) by companies to fulfil their voluntary emissions reduction targets or to create 'carbon neutral' products for their customers. Carbon credits will be traded via four forms of standardised carbon contracts; Global Nature based carbon contracts; Global Technology based carbon contracts; Global Nature based plus carbon contracts; and Malaysia Nature based plus carbon contracts. All standardised carbon contracts are required to be denominated in Malaysian Ringgit (exchange controls apply).

Bursa Carbon Exchange processes all orders and trades. Sellers may submit a sell order on the Bursa Carbon Exchange system through its account, and buyers may submit a buy order in the same manner. Orders are matched through the system, thereby creating a binding and irrevocable agreement between the seller and buyer as principals. The Bursa Carbon Exchange operator does not act as a central counterparty for trades matched through the system.

Bursa Carbon Exchange uses a cash custodian and unit custodian model for the purposes of recording and managing the settlement and trading of carbon contracts. Under the cash custodian model, participants' cash is transferred to, and held on trust by cash custodians to deal with, transfer and exercise rights over the cash pursuant to instructions given by the Bursa Carbon Exchange operator in accordance with trades made by the participant.

Under the unit custodian model, participants will transfer their carbon credits to the unit custodian's account held with Verra for the purposes of transfer, receipt, and settlement of carbon credits. These carbon credits are held on trust for the participant by the unit custodian (which acts as a bare trustee for the participants) to deal with, transfer and exercise rights over the credits pursuant to instructions given by the Bursa Carbon Exchange operator in accordance with trades made by the participant.

Under both models, participants retain beneficial interest and absolute title to the cash and/or carbon credits. As the cash and carbon credits are held on trust by the relevant custodians, when a trade is made, the Bursa Carbon Exchange operator updates the accounts of the relevant participants to the trade on the BCX system, to reflect the change in ownership over the cash / carbon credits in their accounts (at which point, settlement occurs). All the cash and carbon credits traded within the system will continue to be held on trust by the relevant custodians.

The Bursa Carbon Exchange rules allow for carbon credits to be withdrawn from the Bursa Carbon Exchange to a participant's registry account with Verra, such that legal and beneficial title transfers to the participant. Verra generally effects transfer of ownership to the carbon credits it issues through its registry (i.e., the Verra Registry), and not through paper certificates. As for retirement of carbon credits, the retirement will be reflected within the Verra registry, in the name of the entity for whom it was retired. This does not require physical documentation.



The BCX Rules prescribe specific dispute resolution procedures to be followed where a claim, dispute or difference arises either between a participant and the BCX operator, or between participants.

Where the dispute concerns participants (and not the BCX operator), the applicable procedure is that a director / senior representative of the parties (who have authority to settle disputes) must meet in good faith to resolve the dispute within 10 days of the notification provided to the BCX operator (**Good Faith Resolution**). If the dispute cannot be resolved at this meeting, parties are free to enter into any other dispute resolution forum.

Where the BCX operator is a party to the dispute, the same Good Faith Resolution procedure shall take place. If the dispute cannot be resolved at this meeting, parties must refer the dispute to arbitration administered by the Asian International Arbitration Centre (**AIAC**) in accordance with the Arbitration Rules of the AIAC.

- Settlement method:** See the '*Trading method*' section above.
- Licensing:** Generally, there is no specific statutory licensing requirement that would apply to persons wanting to participate as market participants on the Bursa Carbon Exchange. Any specific approval or notification that may be required would be a function of the regulatory requirement applicable to a specific participant.
- Taxonomy:** Bursa Carbon Exchange currently only recognises the Verified Carbon Standard as certified by VERRA.
- Registration:** As the Bursa Carbon Exchange currently only recognises the Verified Carbon Standard as certified by VERRA, title to the carbon credits is verified by reference to the VERRA registry.
- Reporting:** There are no specific reporting requirements under the BCX Rules. The BCX Rules do however permit the BCX operator to disclose any information regarding a participant's or client's identity, the volume or value of trades, and holdings of carbon credits where it is so required for the purposes of, amongst others, the registration of trades and retirements of units, for the operation of Bursa Carbon Exchange, or for market data analysis.





## 9. New Zealand

*Prepared by Bell Gully, Wellington office*

### 9.1. Brief Introduction

The NZ ETS was established under the Climate Change Response Act 2002 (the **CCRA**) as an “all sectors, all gases” system. The NZ ETS is the primary regulatory mechanism for transitioning New Zealand to a lower-carbon economy and to meet New Zealand’s 2050 net zero emissions target and associated five-yearly emissions budgets as set under the zero carbon reforms to the CCRA which were effected in 2019.

The NZ ETS is a cap-and-trade emissions trading scheme and covers all sectors of the economy. It imposes obligations on participants to report to the Government on their annual greenhouse gas emissions. All sectors (apart from agriculture) have surrender obligations as well as reporting obligations under the NZ ETS framework.

In addition to those persons that are required to participate in the NZ ETS, non-compliance persons can also elect to participate in the NZ ETS in respect of CO<sub>2</sub>e removal activities (in respect of which a participant can accrue NZUs).

In addition to the NZ ETS, New Zealand also implements a carbon levy that sets a price for the emissions of synthetic greenhouse gases in respect of imported goods.

### 9.2. Paris Agreement Commitments

**2030:** New Zealand’s nationally determined contribution is to reduce greenhouse gas emissions by 30 per cent below 2005 levels by 2030.

**2050:** New Zealand has committed under the Climate Change Response (Zero Carbon) Amendment Act 2019 to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050.<sup>23</sup>

### 9.3. Compliance Market Overview (Including Voluntary Market Elements)

**Name of scheme:** New Zealand Emissions Trading Scheme (**NZ ETS**).

**Year of launch:** 2008.

**Scope of scheme:** There are broadly two types of entities that can participate in the NZ ETS – those that are compelled to register or opt into registering as a “participant” on the NZ ETS and those that hold and/or trade NZUs on the “secondary market” only (referred to as “trading entities”). The eligibility criteria applicable to “participants” and “trading entities” to access the NZ ETS differ.

Participation in the NZ ETS can be either mandatory or voluntary, depending on the type of activity carried out by the participant. A person who carries out an activity listed in Schedule 3 of the CCRA is a mandatory “participant”.<sup>24</sup> A person who carries out an activity listed in Schedule 4 of the CCRA may voluntarily register as a

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<sup>23</sup> <https://environment.govt.nz/what-government-is-doing/international-action/about-the-paris-agreement/>

<sup>24</sup> Climate Change Response Act 2002 No 40 (as at 1 January 2023), Public Act Schedule 3 Activities with respect to which persons must be participants – New Zealand Legislation





“participant” in the NZ ETS.<sup>25</sup> Although voluntary “participants” have a choice about whether they participate in the NZ ETS, once they become a registered “participant” all of the applicable requirements of the CCRA and the regulations thereunder become mandatory for them to follow.

Eligibility requirements to access the NZ ETS and the registration, licensing and other obligations in respect thereof are relevant to both domestic and foreign persons.

In addition, the Overseas Investment Act 2005 (the **OIA**) requires that an overseas person must apply for consent from the Overseas Investment Office (the **OIO**) if it wants to invest in or acquire “significant business assets” in New Zealand. Bell Gully holds the view that:

- OIO approval is not required for any purchase of NZUs unless more than NZ\$100 million of NZUs are acquired from a single vendor, or from multiple vendors in a series of related or linked transactions; but
- OIO approval could potentially be required if an overseas entity acquires more than NZ\$100 million of NZUs (a) from a single vendor, whether under one transaction or multiple transactions, (b) from multiple vendors, under a series of related or linked transactions.

The application of the OIA to such transactions is highly fact-dependent so overseas entities purchasing NZUs above the threshold mentioned above should seek specific advice on a case-by-case basis.

<b>Greenhouse gases:</b>	Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride.
<b>Regulator:</b>	Environmental Protection Agency ( <i>Te Mana Rauhi Taiao</i> ) and Ministry for Primary Industries ( <i>Manatū Ahu Matua</i> ) in respect of carbon forestry.
<b>Principal unit traded:</b>	New Zealand units ( <b>NZUs</b> ). NZUs are currently the only units that may be traded within the NZ ETS. <sup>26</sup>
<b>Allocation method:</b>	The New Zealand Government sells NZUs directly to the market through auctions – of which there are four per annum. In addition to allocation by way of auction, NZUs are allocated free of charge to emissions-intensive, trade-exposed ( <b>EITE</b> ) businesses. NZUs are also allocated to participants in respect of activities that remove emissions from the atmosphere. The CCRA contemplates various categories of removal activities. However, the only material removal activity that is carried out in New Zealand is carbon forestry. Methodologies for reporting and calculating carbon forestry entitlements are addressed in regulations.
<b>Trading method:</b>	The CCRA (and the associated regulations) also sets out requirements for a “trading entity” to trade NZUs. A “trading entity” must have a holding account on the New

<sup>25</sup> Climate Change Response Act 2002 No 40 (as at 1 January 2023), Public Act Schedule 4 Activities with respect to which persons may be participants – New Zealand Legislation

<sup>26</sup> From 2008 to mid-2015 the NZ ETS was indirectly linked to other emissions reduction systems (e.g., the European ETS) pursuant to the Kyoto Protocol. A plunge in the price of Kyoto units lowered New Zealanders’ incentives to invest in higher-cost domestic emissions mitigation. This led to a de-linking from the Kyoto market in mid-2015. International trading is currently precluded under the NZ ETS and therefore the only product that is covered by the NZ ETS are NZUs.



Zealand Emissions Trading Register (the **NZETR**) to hold and trade NZUs as part of the NZ ETS. The NZETR is an electronic register that contains, among other things, a record of the balance of NZUs in holding accounts in New Zealand. To open a holding account on the NZETR, a “trading entity” must meet the eligibility requirements (i.e., conditions for access) set out in the Climate Change (Unit Register) Regulations 2008 (the **EUR Regulations**). The Environmental Protection Authority (the **EPA**) has produced a guide to setting up and managing accounts in the NZETR, which contains guidance in respect of the practical steps involved in setting up an account.<sup>27</sup> The principal eligibility requirement under the EUR Regulations provides that to open a holding account on the NZETR and trade NZUs, a “trading entity” must be a “qualified person”. The “qualified person” test includes a requirement that, in the case of a “trading entity” that is not an individual, the entity is:

- a New Zealand entity established, registered, or incorporated in New Zealand in accordance with the laws of New Zealand; or
- an Australian company established, registered, or incorporated in Australia in accordance with the laws of Australia; or
- an overseas company, including an Australian company, registered in New Zealand in accordance with the Companies Act 1993.

An alternative to the “trading entity” itself setting up a holding account is to use a custodian to hold and/or trade NZUs on its behalf. The custodian would need to meet the “qualified person” test and the other eligibility requirements set out in the EUR Regulations. This arrangement may be suitable where, for example, a “trading entity” is unable to meet the “qualified person” test and, therefore, cannot participate in the NZ ETS itself. Any such custodian arrangement would need to provide that the custodian is the legal owner of any NZUs acquired and that the other party would be the beneficial owner, with the custodian required to deal with the NZUs on the other party’s written instruction. Any transfers of NZUs would have to be through the custodian’s holding account on the NZETR or through the records of the custodian.

**Settlement method:** See *‘Trading method’* above.

**Licensing:** No licence is required in order to be a participant in the NZ ETS. However, as noted above, only certain entities are required or entitled to register as a participant in the NZ ETS. There are no licensing requirements that must be complied with in order to hold or trade NZUs, provided that a licence may be required by a “trading entity” if it enters into derivatives<sup>28</sup> in respect of NZUs, as opposed to spot transactions only.

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<sup>27</sup> Available at [NZETR-Managing-Account-Guide.pdf](https://www.epa.govt.nz/nzetr-managing-account-guide.pdf) (epa.govt.nz)

<sup>28</sup> The definition of “derivatives” under the Financial Markets Conduct Act 2013 (the **FMCA**) is broad and expressly includes any transaction that is recurrently entered into in the financial markets and is commonly referred to in those markets as a futures contract or forward, an option, a swap agreement or a contract for difference, margin contract, or rolling spot contract. However, the FMCA provides an exception for certain physically settled derivative transactions that meet certain requirements (in particular, that cannot be cash settled or settled via set-off or matching). In Bell Gully’s experience it is common for OTC NZU forward or option transactions to be drafted in a manner that satisfy the exemption, such that they would not be a “derivative” for the purposes of the FMCA.

The FMCA imposes onerous requirements on “derivative issuers” in respect of “regulated offers” of “derivatives”. A “regulated offer” of “derivatives” is an offer of “derivatives” to one or more counterparties where the offer to at least one of those investors requires disclosure under the FMCA (i.e., where at least one counterparty is not a “wholesale” counterparty or falls within another exemption within the FMCA). A “derivatives issuer”



**Registration:** A “trading entity” must have a holding account on the New Zealand Emissions Trading Register (the **NZETR**). See ‘*Trading method*’ above.

In addition to the eligibility criteria for holding an account on the NZETR, a “trading entity” may be required to comply with other registration requirements, for example under the Companies Act 1993, the Financial Service Providers (Registration and Dispute Resolution) Act 2008 or the Anti-Money Laundering and Countering Financing of Terrorism Act 2009.

**Taxonomy/standards:** Not applicable. NZUs are issued by the New Zealand government in accordance with applicable statutory and regulatory frameworks.

**Market protection:** In order for any NZUs to be sold at auction, the reserve price must be met. The reserve price and the methodology for setting the reserve price are kept confidential (but the intention of the reserve price is to prevent the sale of units at auction significantly below prevailing secondary market prices). There is also a “cost containment reserve” that, if triggered, allows for a greater amount of NZUs to be sold at the relevant auction. The trigger is if a ‘trigger price’ is reached at the auction. If NZUs remain unsold at the end of an auction, they will either roll-over to the next auction (if it is held in the same calendar year) or will be extinguished. The price controls aim to keep emissions prices in line with emissions budgets and the Minister is required to consider a number of factors when determining the price control settings (including recommendations from the Climate Change Commission (*He Pou a Rangi*)).

In July 2021, the Ministry for the Environment issued a consultation as regards the governance framework of the NZ ETS. A further consultation was issued in November 2022. Consultation submissions were closed on 27 February 2023. In August 2023, the New Zealand Government agreed to two proposals to improve the market governance of the trading of NZUs. One relates to trade reporting (see below) and the other is to enable the Financial Markets Authority, through ‘Fair Dealing’ provisions in the Financial Markets Conduct Act 2013 (the **FMCA**) (which prohibits (amongst other things) misleading and deceptive conduct), to respond to risks relating to advice, trading and misconduct in the marketplace for NZUs.

**Reporting:** Compliance Participants are required to report on emissions annually in respect of each calendar year by filing annual emissions returns. In August 2023, the New Zealand Government agreed to two proposals to improve the market governance of the trading of NZUs, including to allow the Environmental Protection Authority to collect information about trades made by participants. This includes the price, the transactor’s primary reason for holding an account, and whether trades are happening between non-related accounts. Consultation is ongoing.

#### 9.4. Voluntary Market Overview

As noted above, the NZ ETS includes some elements that are consistent with voluntary carbon markets, as it is possible for non-compliance persons to participate in the NZ ETS. In June 2023, the Ministry for the

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is defined as a person “that is in the business of entering into derivatives”. Accordingly, if a party enters into derivatives with “wholesale” counterparties only, this should not trigger the application of the derivatives issuer licensing requirements in the FMCA.

In order to make a “regulated offer” of “derivatives”, a “derivatives issuer” must, among other obligations, hold a “market services licence” under part 6 of the FMCA and comply with certain disclosure requirements in Part 3 of the FMCA.





Environment, the Ministry for Primary Industries and the Ministry of Business, Innovation & Employment issued a public consultation seeking feedback on proposed changes to the design of the NZ ETS, including as regards emissions reduction and emissions removal activities. Submissions closed on 11 August 2023. Any proposed changes to the NZ ETS will however be subject to further public consultation.

In 2021, the Energy Efficiency and Conservation Authority (**EECA**) released two reports relating to the establishment of a voluntary carbon market. These reports voice EECA's support for the establishment of a voluntary carbon market and propose that New Zealand develops a domestic scheme largely based on the Australian ACCU Scheme. If adopted, this would create a system under which carbon credit units are issued to match verified abatement and a mechanism for trading and selling these units. Although these reports were released in 2021, no significant developments have occurred to date.





## 10. People’s Republic of China

*Prepared by King & Wood Mallesons, Shanghai office*

### 10.1. Brief Introduction

China’s national emissions trading scheme (national compliance market) began trading in July 2021 and currently operates in parallel with a number of pilot schemes. Currently covering more than 2,000 thermal power plants, China’s national compliance market will eventually be expanded to cover other carbon intensive industries including iron and steel, petrochemical, chemical, construction materials, paper, non-ferrous metals and aviation.

Historically China has only set intensity-based targets rather than an absolute cap on emissions, but this is anticipated to change. The 14th Five Year Plan (2020-2025) proposes a dual-cap system based primarily on emissions intensity control, with an absolute carbon cap as a supplement. China has also indicated that it will move away from free allocation of units within the national compliance market towards an auction-based system, although there is currently no timetable in place for this to happen.

It is intended that the pilot schemes will eventually be integrated into, and form part of, the national compliance scheme.

China’s national offset scheme was halted in 2017 but is expected to be relaunched in the near term in order to redress the balance between fossil fuel-based energy producers (that are able to earn income from selling ‘surplus’ units within the compliance market) and renewable energy companies (that do not currently receive any significant benefit from the existing emissions trading platforms). Draft interim measures (**Draft Measures**) in respect of the anticipated relaunch were published by the Ministry of Ecology and Environment in July 2023. It is widely expected that China’s national offset scheme will be restarted during 2023.

### 10.2. Paris Agreement Commitments

**2030:** peak emissions; and

**2060:** net zero emissions.

### 10.3. Compliance Market Overview

#### Part 1 – National compliance market

**Name of scheme:** China Emissions Trading Scheme.

**Year of launch:** 2021.

**Scope of scheme:** Power sector (more than 2,000 thermal power plants). Mainland China targets the expansion of its national compliance carbon market to cover additional sectors such as iron, steel, cement, and aluminium.

**Greenhouse gases:** The relevant regulations defines greenhouse gases as “*natural and man-made gaseous components of the atmosphere that absorb and re-emit infrared radiation, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O),*



*hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6), and nitrogen trifluoride (NF3)*".<sup>29</sup>

<b>Regulator:</b>	Ministry of Ecology and Environment.
<b>Principal unit traded:</b>	China Emissions Allowance (CEA).
<b>Allocation method:</b>	Allocated to key emission units free of charge according to 70% of historic output.  The National Carbon Emissions Trading Market (operated by Shanghai Environment and Energy Exchange) is responsible for trading CEAs. The Carbon Emissions Registration and Settlement (Wuhan) Co., Ltd. is responsible for the registration of CEAs.
<b>Trading method:</b>	Trading of CEAs is conducted electronically and on spot delivery terms (i.e., trading CEAs with immediate payment and delivery) by way of 'one-way bidding' or 'transfer by agreement'.
<b>Settlement method:</b>	Trades are settled on a 'delivery versus payment' basis at the end of the trading day.
<b>Licensing:</b>	Key emission units, as well as other institutions and individuals complying with relevant national trading rules may participate. The enterprises and organisations that trade CEAs are required to become a trading member of the Shanghai Environment and Energy Exchange.
<b>Registration:</b>	The national registration system is operated by Carbon Emissions Registration and Settlement (Wuhan) Co., Ltd. It records information relating to the trading of CEAs such as holdings, transfers, settlements, and cancellations, and also provides settlement services. The information recorded in the national registration system serves as the ultimate basis for determining who owns the applicable CEAs.
<b>Taxonomy/standards:</b>	CEAs are only allocated to key emission units. The volume of CEAs allocated to each key emission unit is calculated according to the standards published by the Ministry of Ecology and Environment.  Enterprises operating in the power sector whose annual greenhouse gas emissions are $\geq 26,000$ tons of carbon are designated as key emission units.
<b>Market protection:</b>	The maximum threshold for a single trade is 100,000 tonnes of carbon and pricing may fluctuate +/- 10% from the previous day's trading. The minimum threshold for a block trade is 100,000 tonnes of carbon and pricing may fluctuate +/- 30% from the previous day's trading. CEAs that have been purchased may not be sold again on the same day. Price stabilisation tools in the onshore carbon markets currently include price ceilings, floors and collars, intensity-based allocation, adjustment of allowances and updated caps.
<b>Reporting:</b>	Key emission units must prepare an annual environmental disclosure report – by 31 March of the year following the annual compliance period. The verification of environmental disclosure is currently managed by municipal level authorities.

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<sup>29</sup> See Art. 42 of 碳排放权交易管理办法（试行）

## Part 2 – Regional pilot compliance markets

Scheme	Exchange	In-scope sectors (non-exclusive)	Principal unit traded	Trading method	Settlement method
Beijing (2013)	China Beijing Green Exchange	Power; cement; petrochemicals; thermal production and supply; transport; aviation; service industry.	<ul style="list-style-type: none"> <li>• BEA</li> <li>• Existing CCER</li> <li>• New CCER</li> <li>• BFCER</li> </ul>	Spot	DVP
Chongqing (2014)	Chongqing Carbon Emissions Trading Centre	Power; aluminium; ferroalloys; cement; iron and steel; glass; paper; petrochemicals; manufacturing; ceramics.	<ul style="list-style-type: none"> <li>• CQEA</li> <li>• Existing CCER</li> </ul>	Spot	DVP
Fujian (2016)	Fujian Haixia Equity Exchange	Power; petrochemical, iron and steel; paper; aviation; non-ferrous metals; construction; ceramics.	<ul style="list-style-type: none"> <li>• FJEA</li> <li>• Existing CCER</li> <li>• FFCER</li> </ul>	Spot and forward	DVP
Guangdong (2013)	China Emissions Exchange	Power; iron; steel; cement; paper; aviation; petrochemicals.	<ul style="list-style-type: none"> <li>• GDEA</li> <li>• Existing CCER</li> <li>• PHCER</li> </ul>	Spot and forward	DVP
Hubei (2014)	China Hubei Emission Exchange	Power and industrial.	<ul style="list-style-type: none"> <li>• HBEA</li> <li>• Existing CCER</li> </ul>	Spot and forward	DVP
Shanghai (2013)	Shanghai Environment and Energy Exchange	Aviation; chemicals; power; iron and steel; petrochemicals; shipping; paper; railways; rubber; textiles.	<ul style="list-style-type: none"> <li>• SHEA</li> <li>• Existing CCER</li> </ul>	Spot and forward	DVP
Shenzhen (2013)	China Emissions Exchange	Power; water; manufacturing; shipping; railways; transport.	<ul style="list-style-type: none"> <li>• SZEAA</li> <li>• Existing CCER</li> </ul>	Spot	DVP
Sichuan (2016)	Sichuan United Environment Exchange	Platform for creating CCER generating projects from various industries covering wind power, hydropower, and photovoltaic power generation. Sichuan does not have its local emission allowances allocation or trading.	<ul style="list-style-type: none"> <li>• Existing CCER</li> </ul>	Spot	DVP
Tianjin (2013)	Tianjin Climate Exchange	Power; iron; steel; petrochemicals; paper; aviation.	<ul style="list-style-type: none"> <li>• TJEA</li> <li>• Existing CCER</li> </ul>	Spot	DVP

### Key:

<b>BFCER</b>	Beijing Forestry Certified Emission Reductions	<b>GDEA</b>	Guangdong Emission Allowance
<b>BEA</b>	Beijing Emission Allowance	<b>HBEA</b>	Hubei Emission Allowance
<b>CQEA</b>	Chongqing Emission Allowance	<b>New CCER</b>	China Certified Emissions Reductions issued after the CCER scheme is restarted
<b>DVP</b>	Delivery versus payment settlement method	<b>PHCER</b>	Pu Hui Certified Emission Reduction
<b>Existing CCER</b>	China Certified Emissions Reductions issued in 2017 or earlier	<b>SHEA</b>	Shanghai Emission Allowance
<b>FFCER</b>	Fujian Forestry Certified Emission Reduction	<b>SZEA</b>	Shenzhen Emission Allowance
<b>FJEA</b>	Fujian Emission Allowance	<b>TJEA</b>	Tianjin Emission Allowance





#### 10.4. Voluntary Market Overview

<b>Name of Scheme:</b>	China Certified Emissions Reduction Scheme.
<b>Year of launch:</b>	2012. See the table above.
<b>Regulator:</b>	Ministry of Ecology and Environment.
<b>Greenhouse gases:</b>	Carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF <sub>6</sub> ). Nitrogen trifluoride (NF <sub>3</sub> ) may also be included for new CCERs (issued from 2023 onwards).
<b>Principal unit traded:</b>	China Certified Emissions Reduction ( <b>CCER</b> ).
<b>Trading Platform:</b>	<p>Existing CCERs (issued before the China Certified Emissions Reduction Scheme was halted in 2017), can be traded within the nine regional pilot exchanges or over the counter.</p> <p>The China Beijing Green Exchange (<b>CBGEX</b>) (formerly, the China Beijing Environment Exchange (<b>CBEEEX</b>)) will function as a public platform for trading new CCERs. CBGEX will be responsible for the China Certified Emissions Reduction Trading System.</p> <p>Between 3 – 10% of CCERs may be used for emissions offset depending on the rules of the applicable compliance scheme.</p>
<b>Trading method:</b>	<p>Existing CCERs, can be traded in the nine regional pilot exchanges or over the counter.</p> <p>New CCERs, will be traded centrally within the CBGEX. The trading method for new CCERs is to be determined.</p>
<b>Settlement method:</b>	The settlement method for existing CCERs is DVP. The settlement method for new CCERs is to be determined.
<b>Licensing:</b>	The CCER registration system accepts members that are registered as a legal person in Mainland China and may also accept other domestic organisations such as public institutions and social organizations. It is unclear now whether foreign entities are allowed to trade CCERs.
<b>Registration:</b>	Details relating to the issue and trading of CCERs (and the underlying project generating the CCERs) shall be registered with (and subsequently cancelled by) the National Greenhouse Gas Voluntary Emission Reduction Registry System (全国温室气体自愿减排注册登记系统) <sup>30</sup>
<b>Taxonomy/standards:</b>	Each project that generates CCERs must be audited and certified by a third-party agency by reference to a published methodology. Prior to the halting of the CCER scheme in 2017, over 200 methodologies had been published. The list has not been updated since 2017. The Ministry of Ecology and Environment has not published the new methodologies for new CCERs.

<sup>30</sup> This is a new registry system used for new CCERs. The old registry system National Voluntary Emission Reduction and Emission Trading Registry System (国家自愿减排和排放权交易注册登记系统) coexists with the new system at the current stage and is used for the registration of existing CCERs.



**Market protection:** The CCER scheme was halted in 2017. In 2021 the Ministry of Ecology and Environment issued a notice allowing key emission units to use Existing CCERs to offset up to 5% of their annual verified emissions for compliance purposes, with no restrictions on project type or vintage. The offset arrangement for new CCERs is to be determined.

**Reporting:** The reporting requirements for new CCERs are to be determined.



## 11. Republic of Singapore

*Prepared by Allen & Gledhill LLP, Singapore office*

### 11.1. Brief Introduction

In addition to Singapore's carbon tax and voluntary carbon market schemes described below, Singapore is the host country of the Climate Action Data Trust. Launched by the International Emissions Trading Association, the World Bank, and the Singapore Government in December 2022, the Climate Action Data Trust will use distributed ledger technology to bring together records from major independent private carbon credit registries and national registries globally, to prevent double counting of carbon credits and increase transparency and trust. The Climate Action Data Trust is receiving enquiries from carbon credit registries that are interested in connecting to the Climate Action Data Trust. The Climate Action Data Trust Data Dashboard is set to launch in Q4 2023, and will allow users (including individuals, consultancies, carbon credit suppliers, project developers, international organisations, verification bodies, media and civil society) to access carbon credit data free of charge.

From 2024, carbon credits that meet the prescribed criteria for eligible international carbon credits under the Carbon Pricing Act can be used in place of fixed-price carbon credits to offset a percentage of taxable emissions. The eligibility criteria for international carbon credits has been recently announced, and more details of the international carbon credits framework (including a list of eligible host countries, carbon credit programmes and methodologies that adhere to the eligibility criteria) will be released by the end of 2023.

The carbon tax rate under the Carbon Pricing Act will also be gradually increased over time, starting from 2024. The scope of greenhouse gas emissions that may be subject to carbon taxes will also be updated.

### 11.2. Paris Agreement Commitments

**Before 2030:** peak emissions;

**2030:** reduce emissions to around 60 MtCO<sub>2</sub>e; and

**2050:** net zero emissions.

### 11.3. Compliance Market Overview

Singapore does not currently operate a compliance carbon market. Singapore does however operate a carbon tax scheme, brief details of which are described below.

**Year of launch:** 2019.

**Scope of scheme:** Under the Carbon Pricing Act 2018 (**Carbon Pricing Act**), Singapore businesses from prescribed industry sectors (such as the manufacturing, power, waste and water sectors) whose emissions exceed 25,000 tCO<sub>2</sub>e per annum must pay a carbon tax on their emissions. The carbon tax is paid by the surrender of carbon credits (**fixed-price carbon credits**) that can currently only be purchased from the National Environment Agency. Only taxable businesses can purchase fixed-price carbon credits.

**Greenhouse gases:** Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, and perfluorocarbons. Nitrogen trifluoride will be added from 2024 onwards.

**Regulator:** National Environment Agency.





- Principal unit traded:** Fixed-price carbon credits.
- Tax rate:** The carbon tax rate, and the price of each fixed-price carbon credit, is currently set at S\$5 per tCO<sub>2</sub>e, and will rise to S\$25 per tCO<sub>2</sub>e in 2024 and S\$45 per tCO<sub>2</sub>e in 2026. The carbon tax rate is expected to reach S\$50 to S\$80 per tCO<sub>2</sub>e by 2030.
- Offset:** From 2024, taxable businesses may surrender high quality international carbon credits to offset up to 5% of their taxable emissions. The high quality international carbon credits must represent certified emissions reductions or removals that occur between 1 January 2021 and 31 December 2030, and must meet the following seven principles: (1) no double-counting; (2) additional to emissions reductions or removals required by laws or regulations; (3) real, i.e. the emissions reductions or removals must have been quantified based on a realistic, defensible and conservative estimate of the amount of emissions in a business-as-usual scenario; (4) quantified and verified by an independent third-party verification entity; (5) the emissions reductions or removals must be permanent; (6) no net harm, i.e. the project that generated the emissions reductions or removals must not violate any applicable laws, regulations or international obligations of the host country; and (7) no leakage, there must not be any material increase in emissions elsewhere. Carbon credits must be determined to have adhered to the eligibility criteria before they can be used to offset taxable emissions.
- Registration:** A business is required to register with the National Environment Agency if its emissions exceed 2,000 tCO<sub>2</sub>e per annum.
- Reporting:** A business that is registered with the National Environment Agency is required to submit emissions reports periodically.

#### 11.4. Voluntary Market Overview

<b>Name of scheme:</b>	ACX (formerly known as AirCarbon Exchange).	Climate Impact X.
<b>Year of launch:</b>	2019.	2022.
<b>Scope of scheme:</b>	Carbon credits are held in a trust. Each digital token is backed by a tCO <sub>2</sub> e carbon credit.	Carbon credits are sourced from a broad range of nature and technology-based climate mitigation projects.
<b>Greenhouse gases:</b>	As per the rules of the voluntary carbon market.	As per the rules of the voluntary carbon market.
<b>Regulator:</b>	As per the rules of the underlying certifier.	As per the rules of the underlying certifier.
<b>Principal unit traded:</b>	Carbon credits generated by projects registered with certifiers such as VERRA or Gold Standard.	Carbon credits generated by projects registered with certifiers such as VERRA or Gold Standard.
<b>Allocation method:</b>	As per the rules of the voluntary carbon market.	As per the rules of the voluntary carbon market.



<b>Trading method:</b>	ACX operates a traditional trading architecture akin to commodity exchanges.	Climate Impact X provides: (i) a marketplace for businesses to buy carbon credits generated from curated projects; (ii) an auction platform hosting curated projects with a transparent bidding process that allows for competitive price discovery; (iii) an exchange platform with real-time bids, offers and transactions of standardised carbon contracts; and (iv) a clearing and settlement service to facilitate payment, delivery and settlement of privately negotiated transactions.
<b>Settlement method:</b>	See 'trading method' above.	See 'trading method' above.
<b>Licensing:</b>	None.	None.
<b>Registration:</b>	Registration of carbon credits is as per the rules of the underlying certifier e.g., VERRA, Gold Standard.  There will be an International Carbon Credits Registry under the Carbon Pricing Act. A list of acceptable international carbon credits will be announced later in 2023.	Registration of carbon credits is as per the rules of the underlying certifier e.g., VERRA, Gold Standard.  There will be an International Carbon Credits Registry under the Carbon Pricing Act. A list of acceptable international carbon credits will be announced later in 2023.
<b>Taxonomy/standards:</b>	Standards that are applied include Verra, Gold Standard and the Carbon Offsetting and Reduction Scheme for International Aviation ( <b>CORSIA</b> ) standards.	Standards that are applied include Verra and Gold Standard.
<b>Market protection:</b>	There are currently no Singapore laws or regulations in place to prevent double counting of carbon credits.	There are currently no Singapore laws or regulations in place to prevent double counting of carbon credits.
<b>Reporting:</b>	As per the rules of the voluntary carbon market.	As per the rules of the voluntary carbon market.



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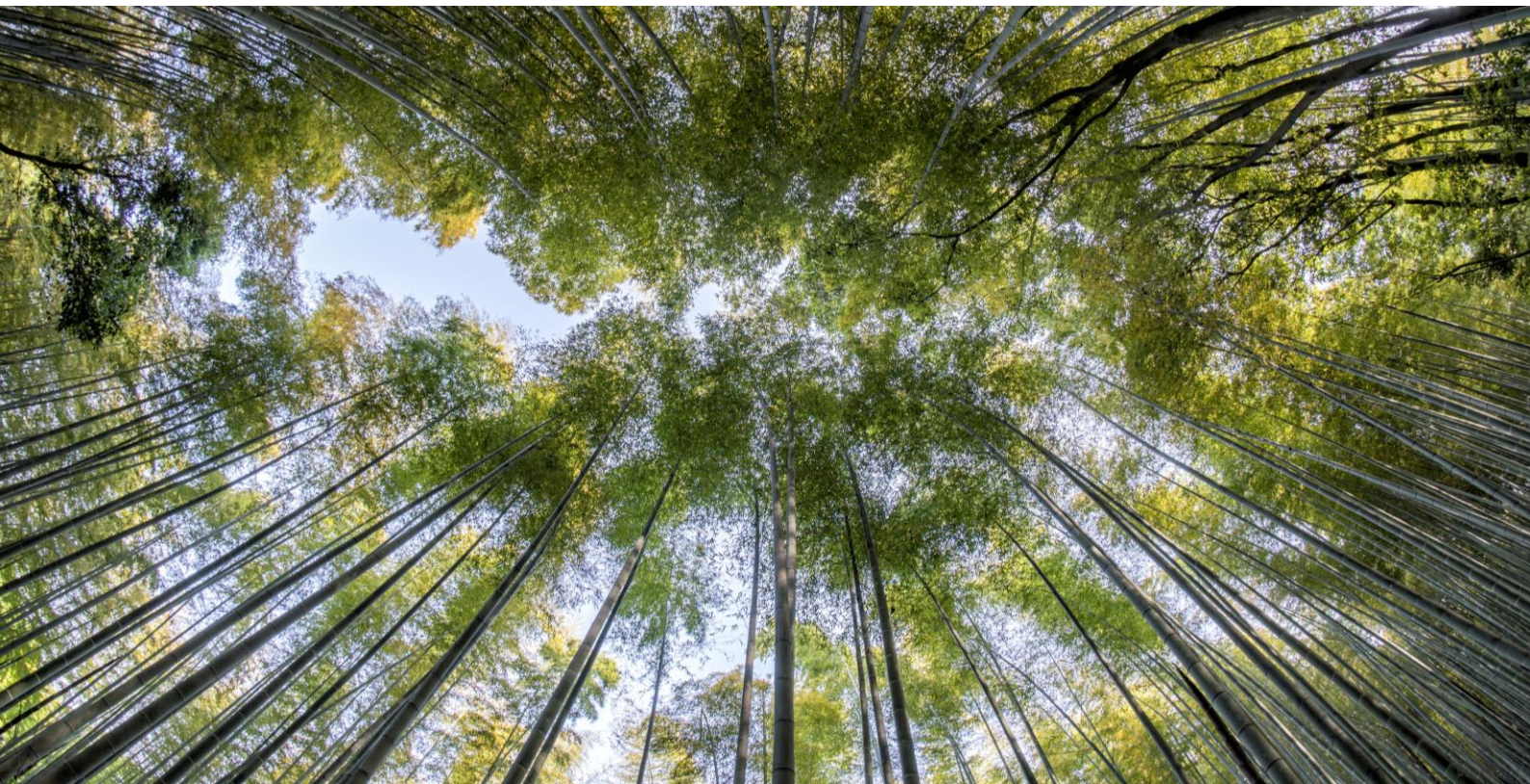
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# Upscaling Carbon Markets Across APAC

*Annex II – Analysis Relating to the Legal Nature and Treatment of Carbon Instruments*

October 2023





## Authors



*Growing Asia's Markets*

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## 1. Purpose of this Document

This document is Annex II to ASIFMA’s paper entitled “Upscaling Carbon Markets Across APAC” dated October 2023. It considers the legal nature and treatment of carbon allowances (in compliance carbon markets or **CCMs**) and carbon credits (in voluntary carbon markets or **VCMs**).

Terms defined in the paper entitled “Upscaling Carbon Markets Across APAC” dated October 2023 have the same meaning in this document unless a contrary indication appears.



## 2. The Classification of Carbon Instruments







### 2.1. Why Classification Matters

The way in which we group ‘things’ together determines how we interact with them. The same ‘thing’ can be grouped differently according to:

- its individual attributes or features; and
- the reason for making the classification.

### 2.2. Recognising Key Differences

At a superficial level, carbon allowances (traded in CCMs) and carbon credits (traded in VCMs) represent the same thing: tCO<sub>2</sub>e. But that is where their similarity ends.

		<u>Carbon allowances</u>	<u>Carbon credits</u>
	<b>Purpose</b>	Each allowance permits the holder to emit 1 tCO <sub>2</sub> e.	Each credit allows the holder to offset 1 tCO <sub>2</sub> e.
	<b>Sub-categories</b>	None.	Various.
	<b>Method of creation</b>	Created under statute.	Created under contract.
	<b>Lifespan</b>	Limited.	Flexible.
	<b>Holder</b>	Covered entities mandated to participate in a CCM.	Anyone (subject to the eligibility requirements of the applicable scheme).
	<b>Trading</b>	Limited to surplus allowances and other covered entities within the same CCM.	Freely transferable according to their terms and market conditions.

It follows that the way in which we treat carbon allowances and carbon credits is different both as a matter of law and for regulatory purposes.



### 2.3. The Distinction Between Legal and Regulatory Treatment

It is important to draw a distinction between:



the **legal** classification and treatment of a carbon allowance or carbon credit, e.g.:

- how title is evidenced, perfected and transferred; and
- how security is taken, perfected and enforced.



the **regulatory** classification and treatment of a carbon allowance or carbon credit, e.g.:

- licensing requirements; and
- trading rules and oversight.

There is currently no consensus as to how carbon allowances or carbon credits are treated either as a matter of law or from a regulatory perspective. The resulting uncertainty has a negative impact on carbon market development, because:

- how carbon instruments are classified from a regulatory perspective informs which authorities have standing to oversee trading activity, and to implement and enforce trading rules; and
- the legal classification of carbon instruments is crucial to in determining not only how title (or ownership) to is evidenced, transferred, and extinguished, and how security can be taken and enforced but also:
  - whether a carbon instrument (or an interest in it) can be held on trust;
  - how a carbon instrument is treated in the event of counterparty insolvency (including with regard to close-out netting); and
  - what rights of redress are available in the event of a dispute.

In the absence of an authoritative statement in each applicable jurisdiction, market participants must look to the courts in common law<sup>1</sup> jurisdictions for guidance (albeit that the courts in such jurisdictions may be unwilling to make statements of general application in the absence of supporting legislation and also noting that the underlying facts of a particular case mean that distinctions can be drawn from other cases). Outside the courts, market participants must rely on general legal principles to determine the legal nature of carbon allowances and carbon credits.

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<sup>1</sup> Common law jurisdictions are jurisdictions in which the decisions made by judges carry equal weight to statute.



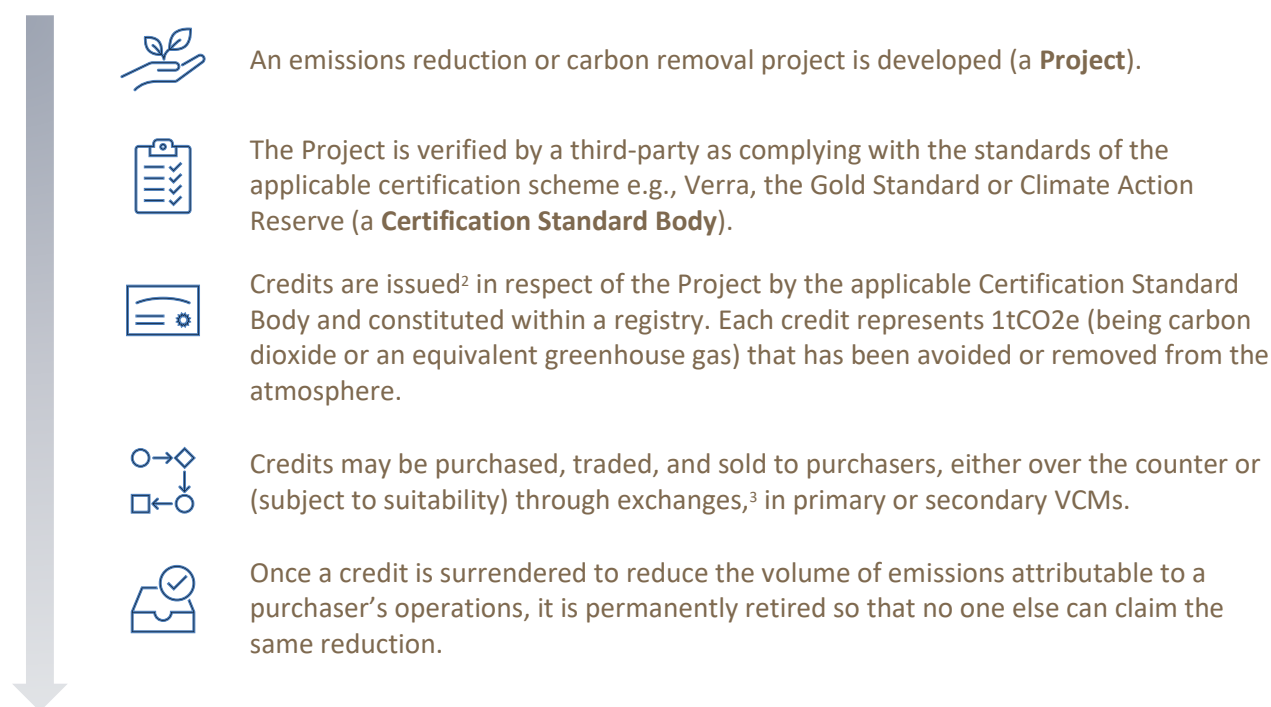


### 3. Defining the Legal Nature of Carbon Credits in VCMs

#### 3.1. What is a Carbon Credit as a Matter of Law?

In determining the legal classification of a carbon credit, it is helpful to step back and consider what a carbon credit is, and most importantly, what benefits are conferred on the holder of a carbon credit.

The lifecycle of a carbon credit can generally be described as follows:



Based on the above attributes, carbon credits can be seen to represent exclusive access to a finite resource; that is, certification that the holder of the credit (being the person in whose account it is credited from time to time in the register) has the right to claim the reduction or removal of 1tCO<sub>2</sub>e per credit, with such right being exercisable upon the retirement of the credit.

It is possible for more than one legal classification to apply to a carbon credit, taking into account:

- its particular attributes: each credit carries the attributes associated with the particular Project that it relates to (e.g., the nature or location of the Project); and
- how an interest in it is evidenced: for example, a bundle of contractual rights or title by registration.

Whilst the rationale will vary between jurisdictions, from a common law perspective, a carbon credit is most likely classified as (i) a type of 'intangible property' or (ii) a 'chose (or thing) in action'.

<sup>2</sup> Carbon credits may either be issued according to: (i) verified emissions reduction or removal; or (ii) future expected emissions reduction or removal.

<sup>3</sup> For example, the Singapore-based global carbon exchange and marketplace, "Climate Impact X", facilitates the sale of large-scale, high-integrity carbon credits through standardised contracts that cater primarily to multinational corporations and institutional investors.

### 3.2. Carbon Credits as a Type of Intangible Property

In order for something to be classified as a type of property under English law:

*“...it must be definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability”.*<sup>4</sup>

Carbon credits can be said to satisfy these criteria on the basis that:



they can be **defined** as a collection of rights conferred on the holder pursuant to the applicable CO2e emissions trading scheme



they can be **identified** by third parties by a unique reference number



they are **capable of assumption by third parties** because they can be transferred under an CO2e emissions trading scheme



they have **permanence and stability** because they are held in a registry account until transferred or retired and they can exist for a term of years

*Intangible property* is an asset that has no physical form but that can nonetheless be owned and possessed. Some intangible property might have a paper embodiment (such as stocks, bonds, or certificates) but other intangible property does not (such as intellectual property and goodwill). Other examples of intangible property that have been recognised by the English courts include cryptocurrency assets such as Bitcoin<sup>5</sup> and carbon allowances traded on the European Union Emissions Trading Scheme (a CCM).<sup>6</sup>

In recognising EU allowances as intangible property, the court in question focused on the existence of a statutory regime to draw parallels with other types of intangible property such as export quotas<sup>7</sup>, milk quotas<sup>8</sup> and waste management licences.<sup>9</sup> Whilst carbon credits may be distinguished from carbon allowances traded on the European Union Emissions Trading Scheme on the basis that: (i) they do not exist under a statutory regime; and (ii) have no special role in facilitating compliance with regulated emissions reduction obligations, such distinction does not, of itself, mean that carbon credits cannot be classified as a type of intangible property under English law.

It is therefore possible to view carbon credits as intangible assets, that are established in accordance with the relevant carbon standard and registry rules, title to which is evidenced by the register entries with the registry that constitutes the carbon credits. The courts have however stopped short of making any determination as to what type of intangible property they may be and have not ruled out classification of carbon credits as choses in action.<sup>10</sup>

<sup>4</sup> *National Provincial Bank v Ainsworth* [1965] AC 1175.

<sup>5</sup> *AA v Persons Unknown* [2019] EWHC 2556 (Comm) (17 January 2020); *Vorotyntseva v Money-4 Ltd (T/A Nebus.com) and others* [2018] EWHC 2596 (Ch).

<sup>6</sup> *Armstrong v Winnington* [2012] EWHC 10, [2013] Ch 156.

<sup>7</sup> *Attorney General of Hong Kong v Nai-Keung* [1987] 1 WLR 1339; *Commonwealth of Australia v WMC Resources Ltd* [1998] 194 CLR 1.

<sup>8</sup> *Swift v Dairywise Farms Ltd* [2000] 1 WLR 1177.

<sup>9</sup> *Re Celtic Extraction* [1999] EWCA Crim J0714-2.

<sup>10</sup> *Armstrong v Winnington* [2012] EWHC 10, [2013] Ch 156.

### 3.3. Carbon Credits as Choses in Action

A chose in action is a right that is claimed or enforced by action rather than by taking physical possession. Recognised examples of choses in action include:



a right to receive a service under a contract; and



a right to access cash in a bank account.

The ability of a Project to generate carbon credits (and the volume of carbon credits that such Project is capable of generating) must be verified as having satisfied the eligibility criteria of the carbon credit scheme pursuant to which the carbon credits are expressed to be issued.<sup>11</sup> The verification process could be viewed as a contractual right of the applicant (e.g., the project developer or landowner) to benefit from the verification process performed by the verifier.<sup>12</sup>

If a Project is later found not to comply with the prescribed requirements or rules of the applicable carbon credit scheme, then the carbon credits associated with that Project (and the corresponding rights to, and interests in, those carbon credits) may be cancelled.

In cases where carbon credits are cancelled and are accordingly not available for surrender to offset a corresponding volume of greenhouse gas emissions, then a claim (in favour of the beneficial owner of the cancelled credits) may arise against (one of more of) the Project owner or developer, the Project verifier, the applicable carbon credit registry, or any intermediary through whom a right or interest in the cancelled carbon credits is acquired or facilitated.

### 3.4. Practical Consequences of Different Legal Classifications

The practical consequences of legal classification of carbon credits as intangible property or choses in action include those specified in the table below.

Carbon credits as intangible property	Carbon credits as <i>choses in action</i>
The legal nature and treatment of carbon credits (in terms of the benefits they confer on the holder) would be consistent for all carbon credits.	The legal nature and treatment of carbon credits (in terms of the benefits they confer on the holder) may be affected by differences in drafting or contractual restrictions.
An asset, title to which passes upon transfer and registration.	A bundle of contractual rights, with transfer being effected by way of assignment (provided there is no contractual restriction against assignment) or novation (all parties' consent must be obtained).
Property without a physical existence (as opposed to tangible property).	Personal property right which can only be claimed or enforced by action at law or equity, and not by taking physical possession of the asset (as opposed to a <i>chose in possession</i> ).

<sup>11</sup> Examples of international carbon credit certification schemes include Verra, The Gold Standard and Climate Action Reserve.

<sup>12</sup> The verifier may be (i) the same entity as the certification body or (ii) a third-party verification body.





Carbon credits as intangible property	Carbon credits as <i>choses in action</i>
An equitable interest may be held in it which is capable of being the subject matter of a trust.	An equitable interest may be held in it which is capable of being the subject matter of a trust.
Legal and beneficial ownership of intangible property can be split, allowing different interests to exist at the same time.	Legal and beneficial ownership of a <i>chose in action</i> cannot be split.
A security interest over it may be created by way of charge or pledge and perfected by way of registration or as otherwise specified by applicable local law.	A security interest over it may be created by way of assignment (provided there is no contractual restriction against assignment) and perfected by way of notice or as o
Remedies available to a successful claimant in the event of a dispute may include a claim for proprietary restitution, conversion, or unconscionable receipt of trust property. The defences available to a defendant may include that of a ' <i>bona fide purchaser for value without notice</i> '.	Remedies available to a successful claimant in the event of a dispute may include a claim for equitable tracing, specific performance, damages, or injunction.

### 3.5. Is One Approach to be Preferred Over the Other?

As a matter of common law, the legal classification of carbon credits as a type of intangible property can be preferred from a financing perspective because, by way of example:

- the legal nature and treatment of carbon credits (in terms of the benefits they confer on the holder) would be consistent for all carbon credits (and would not be affected by differences in drafting or contractual restrictions);
- security can be taken over intangible property by way of a mortgage or a charge and perfected by way of registration;
- registration of a mortgage or a charge on a public registry promotes transparency;
- there is no need to separately serve notice of the creation of a mortgage or charge on applicable counterparties to preserve priority; and
- legal and beneficial ownership of intangible property can be split, allowing different interests to exist at the same time.

As noted above, the legal classification of carbon credits has wide-ranging implications. The possible legal nature of carbon credits currently differs across jurisdictions. In the absence of domestic legislation or an authoritative legal statement (supported by policies that set out the precise regulatory, fiscal, and accounting treatment of carbon credits), the residual uncertainty as to the legal classification of carbon credits will undoubtedly impede the development of VCMs.

Given the difficulties in trying to reach an international consensus as to the legal or regulatory treatment of carbon credits, it is important to emphasise the need for legal and regulatory clarity as regards carbon credits within each jurisdiction that operates VCMs and to promote the need for open discussion and engagement on these issues.





Ultimately, the question as to what legal and regulatory classification is appropriate for carbon credits within a particular jurisdiction must be determined having regard to the underlying legal and regulatory framework that exists within that jurisdiction as well as global level discussions.<sup>13</sup>

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<sup>13</sup> Legal nature of carbon credits is being discussed at the Governing Council of the UNIDROIT. See, <https://www.unidroit.org/wp-content/uploads/2023/05/C.D.-102-14-Legal-nature-of-Voluntary-Carbon-Credits.pdf>



## 4. Defining the Legal Nature of Carbon Allowances in CCMs

### 4.1. What is the Legal Nature of a Carbon Allowance?

In determining the legal classification of a carbon allowance, it is helpful to step back and consider what a carbon allowance is. Whilst both carbon allowances and carbon credits are measured in units of tCO<sub>2</sub>e, there are a number of ways in which the characteristics of a carbon allowance differ from those of a carbon credit.

Carbon allowances	Vs	Carbon credits
CCMs.	VCMs or CCMs?	VCMs.
Issued by a government to an in-scope entity in relation to a specified compliance period.	<b>How created?</b>	Issued by a third-party certification body, by reference to a climate mitigation project independently verified as reducing / avoiding CO <sub>2</sub> e emissions according to the certification standard applied by the certification body.
Domestic use.	<b>Domestic or international?</b>	Domestic or international use. The location of the project has no bearing on the jurisdiction in which the carbon credit may be claimed and retired.
Each carbon allowance represents tCO <sub>2</sub> e. A covered entity must hold sufficient carbon allowances to cover all CO <sub>2</sub> e emissions emitted during the applicable compliance period.	<b>What do they represent?</b>	Each carbon credit represents tCO <sub>2</sub> e that is reduced / avoided by the underlying project as against a 'business as usual' baseline.
Either free allocation or sold (often by auction). Carbon allowances that are allocated for free are issued either by reference to a covered entity's historical emissions ( <i>grandparenting</i> ) or by reference to performance indicators or actual output ( <i>benchmarking</i> ). <sup>[14]</sup> The total number of carbon allowances that may be allocated is capped. The cap may apply at entity, sector, or jurisdiction level. The cap decreases over time.	<b>Allocation process?</b>	The volume of carbon credits allocated in respect of a project correlates to the volume of CO <sub>2</sub> e emissions verified as having been reduced / avoided by that project according to the certification standard against which such project is assessed. Once issued, carbon credits may be sold to covered entities subject to a CCM scheme (the volume of carbon credits that a covered entity may use for compliance purposes is limited according to the rules of the applicable CCM scheme) or to non-covered entities, in each case to offset a corresponding volume of CO <sub>2</sub> e emissions.
Title to a carbon credit is evidenced by registration (see below).	<b>Evidence of title?</b>	Title to a carbon credit is evidenced by registration (see below).

<sup>14</sup> The Korean emissions trading scheme uses benchmarking for cement, refinery, and domestic aviation and grandparenting for other sectors. The Chinese ETS currently uses grandparenting only.



Carbon allowances	Vs	Carbon credits
<p>A covered entity must permanently surrender a sufficient volume of carbon allowances to cover their aggregate CO<sub>2</sub>e emissions during the specified compliance period (generally an annual period). Once a carbon allowance is surrendered, no one else can claim the same reduction.</p>	<p><b>How used?</b></p>	<p>To claim the ‘benefit’ of a carbon credit, the claiming entity must permanently ‘retire’ the carbon credit so that no one else can claim the same reduction.</p>
<p>Excess carbon allowances (in cases where a covered entity emits a volume of CO<sub>2</sub>e that is less than the volume of carbon allowances that it holds) may be sold to covered entities whose aggregate CO<sub>2</sub>e emissions exceed the volume of carbon allowances that it holds during a particular compliance period.</p>	<p><b>Transferability?</b></p>	<p>Carbon credits may be freely traded in the secondary market.</p>
<p>Registered with the centralised registry operated by the applicable CCM.</p>	<p><b>Where registered?</b></p>	<p>Registered with the registry operated by the issuing certification body.</p>
<p>Carbon allowances are allocated for use during a specified compliance period.</p>	<p><b>Life span?</b></p>	<p>Each carbon credit has a specified ‘vintage’ (being the year that the CO<sub>2</sub>e emissions reduction / avoidance that the carbon credit represents occurred) and a specified delivery date (being the date that the carbon credit was available within the applicable VCM). The rules of the underlying registry may specify a ‘age limit’ on the vintage of a carbon credit i.e., the carbon credit may only be retired and used for offset purposes if its vintage falls within a specified bracket.</p>

Based on the above attributes, carbon allowances can be viewed as:

- a type of property that confer an ownership right on the registered holder; or
- transferable administrative rights or authorisations that permit the holder to emit a volume of CO<sub>2</sub>e in compliance with its regulatory obligations, subject to administrative control and monitoring, and transferable only in accordance with the provisions of the applicable CCM.





## 4.2. Carbon Allowances as a Type of Property

In some jurisdictions, carbon allowances are formally recognised by statute as constituting a type of property which confers an ownership right on the holder. For example, the French Environment Code expressly characterises Emissions allowances under the EU Emissions Trading System Directive<sup>15</sup> as well as certified emission reductions and emission reduction units generated under Articles 6 and 12 of the Kyoto Protocol as “movable property exclusively evidenced by a book entry in the account of its holder in the European registry”<sup>16</sup> and “negotiable, transferable by transfer from one account to another”.<sup>17</sup>

In the absence of a formal statutory provision, carbon allowances can be considered as a form of property as a matter of common law on the basis that they:



are definable



are identifiable



may be assumed by  
third parties



have permanence and  
stability

However, in addition to having characteristics in the nature of property, carbon allowances also have characteristics in the nature of administrative rights. The analysis is further nuanced according to whether carbon allowances are allocated for free or acquired pursuant to a bidding process.

## 4.3. Carbon Allowances as a Form of Administrative Right or Authorisation

The following characteristics of carbon allowances are akin to legal classification as an administrative right or authorisation.

### Allocation method:

When carbon allowances are allocated for free, they are allocated by the administrative authorities of the applicable jurisdiction, which authorities retain a certain degree of control over that allocation.

When carbon allowances are auctioned, the auction process is also subject to administrative control to ensure that it is conducted fairly.

### Regulatory treatment:

In Europe, the regulatory classification of carbon allowances as financial instruments under MiFID II imposes some restrictions on type of security interest that may be granted or taken over carbon allowances.

### Autonomy and appropriation:

Whilst carbon allowances may be exclusively appropriated by the holder, they do not have a completely autonomous (separate) existence given that they are allocated for the purpose of compliance with a regulatory obligation to limit CO<sub>2</sub>e emissions.

### Transferability:

Whilst carbon allowances may be freely traded in the secondary market, the right to trade is predicated on the basis that the holder holds an excess of carbon allowances after surrendering a volume of carbon allowances sufficient to cover its aggregate CO<sub>2</sub>e emissions during the

<sup>15</sup> Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading.

<sup>16</sup> The European registry created by Regulation (EU) 389/2013.

<sup>17</sup> Articles L.229-11 (with respect to emissions allowances) and L.229-22 (with respect to certified emission reductions and emission reduction units) of the French Environment Code.



applicable compliance period. Further: (i) the aggregate number of carbon allowances that may be held is capped according to the rules of the applicable CCM; and (ii) any transferee must be a covered entity within the rules of the applicable CCM.

#### 4.4. Practical Consequences of Different Legal Classifications

Formal, legal classification is arguably less important for carbon allowances than carbon credits because, unlike carbon credits:

- carbon allowances are applied solely for the purpose of domestic regulatory compliance – they have no secondary purpose or value outside the confines of the CCM pursuant to which they are issued;
- carbon allowances are ultimately intended to be a diminishing asset class;
- we suggest that there are limited circumstances in which an entity would have reason to hold carbon allowances on trust (carbon allowances are not, by their nature, designed to benefit anyone other than the registered holder);
- the life span of carbon allowances is limited. They will likely be surrendered by the holder to whom they are originally allocated or acquired (to satisfy the compliance obligations of such holder within the compliance period in respect of which the carbon allowances are issued);
- title to carbon allowances is centralised within the registry operated by the applicable CCM; and
- the ‘value’ of a carbon allowance (in terms of the benefit or rights that it confers on the holder) is not derivative but integral.

Notwithstanding the caveats listed above, it is generally accepted that certainty as to the legal classification of an ‘asset’ or ‘thing’ is helpful because it promotes greater liquidity and market confidence.



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