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Legal Nature of Verified Carbon Credits**

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**DRAFT UNIDROIT PRINCIPLES
ON THE LEGAL NATURE OF VERIFIED CARBON CREDITS**

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DRAFT UNIDROIT Principles on the Legal Nature of Verified Carbon Credits

INTRODUCTION

A. Reasons for the Principles

1. Carbon markets are increasingly being recognised as a pivotal mechanism to channel financial resources into initiatives combating climate change. As integral components of the climate policy architecture, these markets play a crucial role in reducing and removing greenhouse gases (GHGs) cost-effectively, mobilising all important carbon finance, and promoting the adoption of low-carbon technologies and solutions.

2. A range of carbon markets exists. Spanning international and domestic levels these markets serve to:

- (a) enable governments to pursue voluntary cooperation between countries in the implementation of their nationally determined contributions (NDCs), allow for higher ambition in their mitigation and adaptation actions, and promote sustainable development and environmental integrity; and
- (b) incentivize and facilitate participation in the mitigation of GHG emissions by public and private entities. Private entity engagement may be through compliance frameworks or through voluntary activity to reach self-determined climate or other sustainability commitments.

3. There are two main types of instruments traded in two main types of carbon markets: (i) government issued permits or 'allowances', which are predominantly used in 'compliance markets'; and (ii) credits issued post independent verification that an emission of GHGs has been reduced or avoided or GHGs have been removed (a 'GHG mitigation outcome') as a result of specific project activity—'verified carbon credits' or 'VCCs'—which may be used in 'voluntary carbon markets' and, where permitted, in compliance markets.

4. Although it has been common to refer to the market in VCCs as the voluntary carbon market, the use case for VCCs is broader than this and encompasses the following:

- (a) Jurisdictional compliance markets where covered entities must submit eligible compliance units to meet regulatory requirements and the rules indicate that such eligible compliance units can be government issued permits (allowances) and in some cases eligible VCCs. There are currently a large number of compliance schemes in force globally and many more under development or consideration.¹
- (b) Jurisdictional emissions taxation schemes where partial offset of tax obligations is permitted through the use of eligible VCCs, e.g. Singapore.
- (c) Sectoral compliance markets where covered entities may submit eligible VCCs for compliance, e.g. the International Civil Aviation Organization Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
- (d) International cooperative approaches under Article 6 of the Paris Agreement.
- (e) Voluntary markets where private entities make voluntary climate or other sustainability commitments including, (i) a commitment to voluntarily reduce or remove their own emissions outside of a compliance obligation, and (ii) a

¹ International Carbon Action Partnership.

commitment to voluntarily finance GHG mitigation outcomes through the purchase of VCCs.

5. There are several different carbon markets where allowances and or VCCs can be traded. The market in VCCs has the potential to be a crosscutting market with global reach that is critical to service compliance obligations and voluntary commitments. The market in VCCs is at a pivotal point in its development, transitioning from the niche voluntary market that has been supply-side focused and governed largely by NGO crediting bodies, to a more uniformly regulated demand-side market driven by both compliance and voluntary obligations and financed, like conventional global markets, by regulated entities, financiers and investors. To enable this transition, clarity on the legal nature of the VCC under private law is fundamental to building a market-based model with adequate governance and legal certainty in private transactions. These Principles are designed to facilitate the scaling of the market in VCCs by providing legal certainty in relation to key issues of private law (see further paragraphs 64-70). Without legal certainty, market transactions have inherent inefficiencies and transaction costs are increased.

6. Although the importance of VCCs as a mechanism for raising finance and distributing benefits is rapidly being recognised by parties to the Paris Agreement², in many jurisdictions the legal nature and the regulatory oversight of the market for VCCs remain in development. Certainty on the legal classification of a VCC under private law is critical to support market participation by private entities including project developers, investors and other providers of financing. It informs market mechanics such as how transfers may be completed by sale or as collateral, the treatment of VCCs held by an entity in insolvency, and it influences the accounting and tax treatment of VCCs.

7. While a small number of jurisdictions have already clarified the legal status of VCCs, depending on the relevant legal framework, this may only apply to units issued under government legislative or regulatory schemes within that jurisdiction, and not VCCs arising from independent crediting bodies. These Principles offer a framework for the legal treatment of VCCs under private law when no applicable clarification exists. It is worth distinguishing the treatment of derivatives or other contracts where VCCs are the underlying asset from the VCC itself; the former would fall under other law applicable to those derivatives or contracts. Derivative markets play a critical role in any market, facilitating raising capital, creating price transparency, and helping market participants manage risk. Derivatives may also enhance transparency in the underlying markets and promote the liquidity necessary to raise finance. The derivatives market and the markets in VCCs are co-dependent, with the derivatives market depending on the strength and integrity of the underlying VCC markets, and the VCC market relying on the derivatives market to promote transparency and liquidity. This further supports the need to clarify the legal nature of the underlying VCC under private law to enable a functioning market to develop.

B. Development of Carbon Markets - United Nations Framework Convention on Climate Change and the Kyoto Protocol and Paris Agreement

8. Carbon markets and emissions trading schemes have emerged as critical tools in the global effort to mitigate climate change, driven by the objectives set out in the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol and Paris Agreement thereunder.

9. The Kyoto Protocol³, adopted in 1997, operationalized the UNFCCC by committing industrialized countries and certain economies in transition to limit and reduce GHG emissions in accordance with stipulated targets set out in Annex B to the Kyoto Protocol.

² Paris Agreement under the United Nations Framework Convention on Climate Change, adopted 12 December 2015, entered into force 4 November 2016, 55 ILM 740 (2016).

³ Kyoto Protocol to the United Nations Framework Convention on Climate Change, adopted 11 December 1997, entered into force 16 February 2005, 2303 UNTS 162.

10. The Kyoto Protocol introduced three market-based mechanisms aimed at enhancing the cost-effectiveness of mitigating emissions:

- (a) Emissions Trading (ET) under Articles 3 and 17: Allowed certain Parties to the Kyoto Protocol to transfer and acquire assigned amount units (AAUs), a mechanism aimed at cooperatively reducing or removing emissions at source, provided such units were supplemental to their domestic actions aimed at meeting their targets under the Kyoto Protocol.
- (b) Clean Development Mechanism (CDM) under Article 12: Enabled entities authorized by industrialized countries to invest in emission reduction and avoidance projects in developing countries, earning certified emission reduction (CER) credits that could be traded or used to meet their own targets.
- (c) Joint Implementation (JI) under Article 6: Allowed entities authorized by certain Annex B industrialized countries to earn emission reduction units (ERUs) by investing in projects that reduced emissions in other industrialized countries.

11. These three mechanisms collectively aimed to provide flexibility in how countries met their targets under the Kyoto Protocol. The JI is no longer operational, and AAUs are no longer in circulation; however certain CDM methodologies and CERs are permitted under the new Paris Agreement Crediting Mechanism (PACM) under Article 6.⁴

12. As part of the response to the commitments under the Kyoto Protocol, some jurisdictions implemented domestic emissions trading schemes, for example the EU Emissions Trading Scheme (EU ETS), New Zealand, Japan, Kazakhstan, regional US, Canada, China, and others. By way of illustration of these mechanisms, under the EU ETS primary emitters of GHGs within specified sectors are allocated a cap on their emissions and a compliance obligation to submit allowances issued under the EU ETS to match their actual emissions. In the early stages of the EU ETS certain quantities of allowances were freely allocated, allowing an entity with a compliance obligation to reduce its emissions below its cap and sell its excess allowances to an entity that had exceeded its compliance obligation—a so-called cap-and-trade mechanism. Now free allocation has been phased out across the energy sector and is being phased out in other covered sectors, such as the chemicals industry, with allowances being available only under auction and then in the market. This type of emissions trading scheme is termed a compliance scheme as there is a legal obligation on covered entities to comply and submit allowances. It is a market mechanism as the allowances may be traded, with the price of allowances generally being a function of the market supply and demand. High volumes of emissions create a high demand for allowances and a consequent higher price, incentivizing an adjustment to volumes of emissions downward.

13. Each emissions trading scheme is governed by its own legislated or regulated rules dictating which sectors are covered, how compliance obligations are set, and what units are eligible to meet the compliance obligation. Under the EU ETS, for example, allowances (EU Allowances or EUAs) are issued by the governing body into the market in a closed registry and may then be traded and finally submitted for compliance purposes. During its early phases, the EU ETS also allowed a certain amount of covered entities' compliance obligations to be satisfied with the submission of CERs or ERUs. Thus, for compliance purposes, an entity could submit EUAs, that are in effect permits issued by the ETS governing body, and also CERs or ERUs that are in effect VCCs. In 2036 the EU ETS will again allow certain Paris Agreement Article 6 units to be submitted for up to 5% of an entity's compliance obligation. The Singapore ETS and Canadian ETS each allow certain VCCs to be submitted for compliance purposes.

⁴

See para 18 below.

14. Alongside the compliance market, a market developed where entities (predominantly corporate and non-governmental entities) desired to voluntarily invest in GHG mitigation outcomes or the projects that resulted in them. Independent crediting bodies developed to meet this need, creating frameworks for project and programme methodologies and quality standards for the issuance of units relating to verified GHG mitigation outcomes.

15. The Paris Agreement, adopted in 2015, expanded the scope of climate action by requiring all countries, not just specified industrialized countries and economies in transition, to commit to NDCs to address climate change. The Paris Agreement's primary goal is to limit global warming to well below 2°C above pre-industrial levels, with efforts to limit the increase to 1.5°C.

16. Under Article 6 of the Paris Agreement, two new market mechanisms were introduced:

- (a) Article 6.2 facilitates cooperative approaches where countries can voluntarily agree to create and trade internationally transferred mitigation outcomes (ITMOs).
- (b) Article 6.4 establishes the Paris Agreement Crediting Mechanism (PACM), a UNFCCC centralized mechanism, similar to the CDM, where certain carbon credits (6.4ERs) can be generated and used domestically as Mitigation Contribution Units (MCUs) or authorized by the host country for sale on the international market as ITMOs.

In this context Article 6 mitigation outcomes may also be VCCs, if they are issued as a result of project based, or a programme of, activities.

17. In addition to the regional emissions trading schemes there is also the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), a global market-based measure developed by the International Civil Aviation Organization (ICAO) which along with the International Maritime Organization, is not part of the UNFCCC. CORSIA was developed to help the aviation industry manage its carbon emissions. Under the scheme, airlines must submit VCCs that have been determined to be CORSIA eligible emission units to offset their emissions in respect of certain international flights. It is estimated that the 15 largest airlines emit approximately 300 million tonnes of emissions a year.⁵ There are no allowances or permits issued into this market and only certain VCCs issued under ICAO-approved crediting programs are eligible for submission.

C. Typical lifecycle of a VCC

18. To provide context to these Principles, the key steps in a typical lifecycle of a VCC are broadly described below. In summary there are three stages: (i) VCC creation; (ii) primary and secondary market trading; and (iii) use and retirement.

19. All VCCs are created as a consequence of activities from a project or programme of activities designed to reduce or avoid GHG emissions or remove GHGs from the atmosphere. Such activities may be undertaken within a single localised project or implemented through large scale initiatives across more than one location, the former being a project and the latter a programme of activities. In this Introduction (and in the Principles) both are encompassed under the term 'project'.

20. The typical lifecycle of a VCC has commonalities whether it is issued by a governmental crediting body, the Supervisory Body of the PACM or an independent carbon crediting standard (all such bodies individually and collectively referred to in this document as Crediting Bodies or 'CBs').⁶ A CB may run a number of different programmes relating to different types of credits, for example a programme for the generation of VCCs and a different programme for the generation plastic credits or biodiversity credits. The activities that give rise to the credits may be contained within one

⁵ [To be added].

⁶ Examples of such CBs include, but are not limited to, the Verified Carbon Standard (Verra), the Gold Standard, the American Carbon Registry, Climate Action Reserve, and Puro Earth.

localised project or across a number of locations referred to as a 'programme of activities'. In summary, the typical lifecycle entails the setting of the methodology that will be used by a project developer, commonly the validation and registration of the project or programme of activities with a CB into a project registry, the implementation of the project or programme of activities in accordance with the methodology and the rules of the relevant programme set by the CB (a carbon crediting programme or CCP), the independent third-party verification by a qualified verifier that the project or programme of activities has achieved the quantified GHG mitigation outcome and any required environmental or other co-benefits stipulated in the methodology and the relevant CCP. The CB then directs the VCCs to be issued into the stipulated account in a VCC registry.

21. Transactions in the secondary market for VCCs may then be settled between market participants with the VCCs transferred between buyers' and sellers' accounts within a VCC registry.

22. The last stage of the life cycle usually entails an instruction by the end buyer to the relevant VCC registry operator to retire the VCC resulting in the transfer of the VCC into a permanent retirement account and removal of that VCC from further use or circulation in the market. The entity retiring the unit may use proof of such retirement to make certain claims, fulfil a compliance obligation or to fulfil a voluntary commitment.

23. Set out below is a more detailed description of the typical lifecycle of a VCC. Individual CB rules may diverge from these descriptions and use different terms.

1. VCC creation

(a) Methodology, validation and registration

24. A 'methodology' refers to a set of detailed criteria, boundaries, and procedures used to measure, quantify, monitor, and verify the GHG mitigation outcomes achieved by a project. The CB, which can be a private or public entity, often both develops its own methodologies with scientific experts and determines what third party methodologies it will accept. Methodologies may generally fall into two main categories with potential overlaps: nature-based methodologies and technology-based methodologies. Within each of those categories are methodologies that reduce or avoid⁷ emissions and methodologies that remove GHGs from the atmosphere. Examples of such methodologies include nature-based removals through afforestation and reforestation, technology-based removals through carbon capture and sequestration, nature-based GHG reductions through reduced methane from ruminants and technology-based reduction through fuel switching. Each CB publishes the details of the methodologies it can accept. New projects or programmes of activity may adopt an existing methodology or develop a new methodology subject to approval of the relevant CB.

25. The key actors at this stage are the project proponent and the project developer who can be the same or different entities. The project proponent is the individual or entity that possesses overall responsibility for the project. It is the entity in whose name the project is registered and is usually the entity into whose registry account the CB will instruct the VCCs to be recorded. The project developer is the entity that brings the project to fruition, including sourcing finance and engaging with all stakeholders.

26. Essential to registration of a project with a CB is the project design document (PDD) usually generated by the project developer who compiles the requisite documentation including technical specifications, environmental impact assessments, financial analyses and the basis for any expected

⁷ Some methodologies may be described as 'emissions avoidance'. For the purpose of this introduction avoidance is considered to fall within the scope of reduction, although it is recognised that some avoidance methodologies may from a technical viewpoint stand outside of the reduction category.

environmental and social benefits. This document serves as a blueprint for the project and describes all aspects including its boundaries, objectives, how the methodology will be implemented and monitored and the expected outcomes. The PDD also includes a baseline, 'business as usual', emissions scenario that represents the level of emissions that would occur in the absence of the project. The PDD provides the basis for subsequent validation and registration of the project and verification of the achievement of GHG mitigation outcomes and other social or environmental benefit(s).

27. Once a PDD has been developed, the project developer, contingent on the CB requirements, seeks validation of the project by a third-party independent auditor accredited by the CB to conduct validation and verification of the type of carbon project⁸ (a validation/verification body or VVB). A VVB has two main roles: (i) to *ex ante* validate that the project set out in the PDD conforms to the applicable methodology and the rules and requirements of the relevant CB and CCP and assess the likelihood that the expected GHG mitigation outcomes and environmental and social benefits will be achieved; and (ii) to *ex post* verify that the project has achieved the GHG mitigation outcomes and environmental and other benefits set out in a monitoring report. If the project is validated by the VVB, it may then be registered by the CB as a project under its relevant CCP. The CB generally has a publicly accessible registry or record of key information including the location and scope of the project, the relevant PDD, and the project proponent. The project registry is separate and different from the VCC registry which holds account information and serialised VCCs.

(b) Measurement, reporting, and verification (MRV)

28. The rules of the CB require the project developer to continuously monitor any project to ensure it is being implemented in accordance with the PDD. Such monitoring runs through pre-stated time periods (monitoring periods) that are appropriate to the project and methodology. The project developer produces a monitoring report that contains the data and calculations relating to the GHG mitigation outcomes and environmental and social benefits during that monitoring period. The monitoring report forms the factual basis upon which independent verification by a VVB is conducted in order to verify that the GHG mitigation outcomes have been achieved.

29. The VVB is responsible for verifying that the project exists and has been implemented in accordance with the methodology and the specifics of any required GHG Mitigation Project validation report. The VVB is also required to verify the accuracy of the monitoring report and that the claimed achievement of GHG mitigation outcomes is accurate, real, and in accordance with the applicable methodology and rules of the CCP. Verification occurs periodically (in respect of a verification period) and might coincide with the monitoring periods or not. This process is governed by international standards, including the CCPs and the ISO 14064 and 14065 standards amongst others. It requires a site visit to ensure and verify that the project exists and is operating in accordance with all CCPs including related environmental and social safeguards. The timing of a verification is a practical matter relating to the project type and methodology. For example, for a carbon capture and sequestration project linked to an energy plant such verification could be largely a desktop process done through analysis of data relating to energy production and could be done quarterly, whereas verification of a forestry project might require gathering primary data on the ground and it could be more appropriate for verification to occur over longer intervals such as annually.

30. Following its analysis, the VVB may: (i) verify the stated achievements and produce a positive verification statement; (ii) make further comments with corrective action requests (CARs) and requirements for the project developer to achieve a positive verification statement; or (iii) produce a negative verification statement indicating that the project did not achieve some or all of the intended GHG mitigation outcomes and environmental benefits in accordance with the PDD and the

⁸ Examples of VVBs include Det Norske Veritas, TÜV SÜD, Bureau Veritas Certification Holding and Société Générale de Surveillance.

rules of the CCP during the relevant verification period. Once the project developer has a positive verification statement it can submit it to the CB as the basis for the CB's approval of GHG mitigation outcomes and the creation of a corresponding number of VCCs claimed in respect of the verified GHG mitigation outcomes during that verification period.

31. Each VCC represents the achievement of the verified GHG mitigation outcome of specific GHGs measured on a one tonne of carbon dioxide equivalent (CO_{2e}) basis. The equivalence⁹ is measured using a conversion factor based on the relative global warming potential of the relevant GHG over a period of time as stipulated by the CB in accordance with the CCP (which is aligned with the global warming potentials stipulated under the UNFCCC). By way of example, the conversion factor for methane is approximately 28, meaning the removal of 1 tonne of methane would be equivalent to 28tCO_{2e} or 28 VCCs.

32. In summary, the project developer continuously monitors the project and periodically produces a monitoring report containing data analysis of the GHG mitigation outcome (the quantity of GHGs removed, avoided or reduced) and the VVB assesses and confirms the accuracy of the monitoring report through independent review and potentially data gathering. The VVB may make recommendations or verify that the monitoring report is correct and the project is eligible for generation of VCCs. The process of monitoring, measurement, reporting, and verification is often referred to as the (MRV) process.

(c) Issuance and registry

33. Where there is a positive verification statement, the project developer can submit that statement to the CB for approval of the generation of VCCs. If the CB approves the verification statement, it may then direct the registry to record the VCCs in the specified registry account or notify the project proponent that it can request that the relevant VCCs are recorded in the specified registry account (such process of serializing and generating the VCCs into an account is commonly called 'issuance'¹⁰ of VCCs). A request for issuance may be made at any time after the CB has notified its approval of the positive verification statement to the project proponent. In certain instances, the project proponent may delay such request to generate some or all VCCs for commercial or tax reasons. The CB rules around designation of a recipient account can differ from one CB to another but this is usually the account of the project proponent or an investor or financier. Normally information relating to a project indicating the quantity of GHG mitigation outcomes achieved, the volumes of VCCs that have been issued, cancelled or retired and those that are pending issuance is public and recorded in the project registry, but information in respect of registry account holdings is not.

34. VCCs can be credited as a single block representing a defined volume of VCCs or as individual VCCs. In each case either the block or the individual VCCs are allocated a unique identifier number. A block may be split into smaller blocks or individual VCCs to facilitate transfer between accounts, and each new block or VCC will then be allocated its own unique identifier to ensure there are no duplicates.

35. Some CBs may issue ex ante certificates to represent the expected future achievement of GHG mitigation outcomes and environmental benefits from a registered project, based on projections in the PDD. These ex-ante certificates are issued before the GHG mitigation outcomes and underlying environmental benefits have occurred and are typically conditional on subsequent monitoring, reporting, and verification. Ex-ante certificates may be used to signal a supply pipeline of VCCs and

⁹ Sources of conversion factors include the GHG Protocol, the IPCC, UNFCC Guidelines and the ISO GHG Accounting Standard.

¹⁰ The word 'issuance' is commonly used in the markets, and is therefore used in this Introduction, but given that it can be used in several different contexts, it is not a defined word and is not used in the Principles themselves (see commentary 2.11).

support project financing or underpin advance market commitments, but they do not constitute VCCs since the GHG mitigation outcomes have not occurred and verification has not yet taken place.

36. The VCC registry can be managed and/or operated by the CB (or a member of the group of companies of the CB) or by an independent service provider. At the time of writing this Introduction most of the CBs manage their own registries through contracted registry service providers and there is very limited interoperability between registries. This means that transfers of VCCs can only take place within the same VCC registry. The registry infrastructure is evolving, and it is foreseeable that interoperability between separate registries or the development of meta-registry may be enabled in the future.

(d) Safeguards and social and biodiversity co-benefits

37. The generation of VCCs is subject to a detailed system of environmental and social safeguards, designed to ensure that GHG mitigation projects do not cause social or environmental harm and, where applicable, also deliver social and or biodiversity co-benefits.

38. CBs require projects to comply with all applicable laws, including those with respect to human rights, and social and environmental impacts. CCPs administered by the CB generally include detailed requirements relating to stakeholder consultation, obtaining free, prior and informed consent (FPIC), grievance mechanisms, ownership land tenure clarity, protection of biodiversity, and the avoidance of involuntary displacement of local peoples.

39. The Integrity Council for the Voluntary Carbon Market (ICVCM) reinforces these expectations through its Core Carbon Principles (CCPs), which require CBs to have *'clear guidance, tools and compliance procedures to ensure mitigation activities conform with or go beyond widely established industry best practices on social and environmental safeguards while delivering positive sustainable development impacts'*.¹¹ While the ICVCM does not certify VCCs, it sets minimum integrity thresholds that methodologies must meet to be CCP-labelled. Similarly, the CORSIA Eligible Emission Unit Criteria require approved programs to disclose the sustainable development criteria used.

40. Beyond these safeguards, some projects may achieve additional certification under complementary programmes that focus specifically on social, community, biodiversity, or sustainable development outcomes. Where these additional requirements are independently verified, the associated VCCs can carry an attribute label indicating the presence of verified co-benefits. Examples include labels reflecting climate, community and biodiversity benefits, sustainable development impacts aligned with the UN Sustainable Development Goals (SDGs), or gender-related outcomes. These labels signal that the project has met additional, standard-specific criteria beyond emissions accounting that generally make the VCC more valuable. Such labelling supports transparency, informed purchasing decisions, and the alignment of finance with broader environmental and social objectives.

2. Primary and secondary market trading

41. The primary market consists of the original issuance and purchase of VCCs from the project proponent, normally through bespoke spot or forward investment agreements that include sale and purchase of VCCs. The purchasers in the primary market are often investors that have either provided pre-financing themselves or obtained financing through third party funding in return in part or whole for the delivery of VCCs. This method of financing is critical for the functioning of the market as there is often a considerable time lag (sometimes years) between project initiation and issuance of VCCs during which time material capital is required for development and operation of the project. The investor may be the final recipient of the VCCs that intends to use the VCCs for its own submission

¹¹ <https://icvcm.org/core-carbon-principles/>.

under a compliance scheme or to contribute to its voluntary climate action, or it may be a market intermediary intending to sell the VCCs in a secondary market.

42. Buyers and sellers in the secondary market may transact bilaterally or on an exchange (including ICE, the CME and EEX) for spot, forward, or futures delivery.

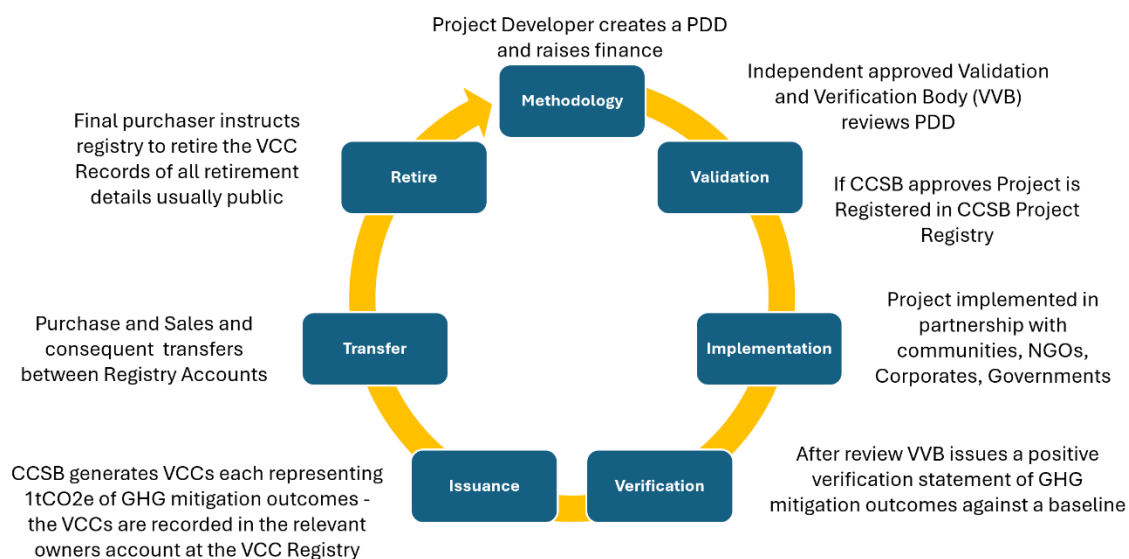
43. The purchase and sale of VCCs may be settled physically or financially but generally requires the movement of VCCs between accounts. Usually, such movements are initiated on instruction from the transferring party to the registry operator. Such transfers may occur multiple times in a secondary market.

3. Use and retirement

44. The final stage in the intended lifecycle of a VCC is retirement. Retirement refers to the process where the CB/registry operator, on instruction from the holder, moves, tags, freezes, removes or otherwise sterilises the relevant VCC as retired, thereby preventing that VCC from circulating further and ensuring it cannot be used or transferred again. In effect all that remains recorded in the registry is the previous information relating to the VCC and a record of the retirement. The VCC itself no longer exists as it is not registered in an operational holding account. The holder of the VCC is usually required to notify the CB whether it is retiring on its own behalf or on behalf of another party and the purpose of retirement.

45. Some entities retiring a VCC may be doing so to demonstrate a commitment to voluntarily finance the reduction, avoidance or removal of emissions through the purchase of VCCs. In other instances, an entity may have a compliance obligation under a domestic or sectoral carbon trading scheme (for example the EU ETS, Singapore carbon taxation scheme, or CORSIA) that it can fulfil through proof of retirement of VCCs that are eligible under the rules of that scheme.

Typical Life Cycle of a VCC



4. Reversal

46. Events can occur at a project level that affect the integrity of a VCC relating to that project. Such events may occur after a VCC has been registered in an account or may have occurred before registration of the VCC in an account but only come to light after such registration. The rules of the relevant CCP and the CB normally determine how such events can be dealt with by the CB.

47. If the project removes GHGs and sequesters such GHGs in a carbon sink (such as a forest or soils) but some or all of the GHGs sequestered escape, then some or all of the GHG mitigation outcomes of the relevant project are reversed. This can result in more VCCs being in existence than GHG mitigation outcomes represented by those VCCs. The CB generally has detailed rules and requirements dealing with such circumstances. Some CBs may have rules permitting requests for the voluntary cancellation of VCCs to rebalance the number of VCCs in circulation with the volume of current GHG mitigation outcomes, in other cases where the risk of such reversal is considered material, the CB may permit only a percentage of the verified GHG mitigation outcomes to result in registered VCCs. This creates a buffer pool of GHG mitigation outcomes ensuring the aggregate number of VCCs registered do not exceed the actual GHG mitigation outcomes. A buffer pool can be project-related and defined as part of the relevant methodology or, in some cases, a CB may create a buffer pool that can be used to mitigate reversal across a number of projects (often of the same type of methodology), with the objective to ensure there is never an accounting deficit between the number of VCCs in circulation from that CB and the total GHG mitigation outcomes achieved in the atmosphere from projects registered with that CB. The buffer pool system ensures any VCC always represents a GHG mitigation outcome of one tonne of CO_{2e} without disrupting the market. Not all projects are backed by buffer pools, particularly where reversal is a low risk. The risk of reversal may be allocated contractually or independently insured where the insurance may either replace the affected VCC with an unaffected VCC or provide monetary compensation provided the affected VCC is cancelled.

5. Overissuance

48. Despite the safeguards that are part of the process of creating VCCs, it is possible that the volume of GHG removed, reduced or avoided from a project might be overestimated, resulting in the creation of too many VCCs. As is the case for reversals, the rules of the relevant CCP and the CB normally determine how such events can be dealt with by the CB.

49. The difference between an overissuance and a reversal is that an overissuance results from events and circumstances occurring at or prior to the time the relevant VCCs are created, while reversals result from events after the VCCs are created. Where an overissuance occurs, its cause in many cases will be honest error. Overissuance might also result from evolving opinions regarding the scientific methodology used to determine the GHG benefits from a project, although typically a change in a CB's methodology to reflect evolving scientific knowledge would be applied only prospectively. Another possible cause of overissuance is fraud or other deliberate wrongdoing. The processes of project certification and VVB verification of GHG benefits is intended to minimise the risk of wrongdoing, but it is impossible to eliminate the risk altogether (and there have been instances of fraud identified in the past).

50. Despite the difference between overissuance and reversal, some of the mechanisms used by CBs to address them are the same. As an example, a buffer pool can be used to correct what would otherwise be an imbalance between the number of VCCs created and the actual volume of GHG benefits from a project. The project developer might in such event have an obligation to replenish the buffer pool. Another way to address overissuance is for the CB to stop authorising the creation of new credits for an ongoing project, until the balance between the number of VCCs and the verified GHG benefits is restored to the right level. The project developer might also be required by the CB

to voluntarily cancel excess VCCs, where the terms of the CB's user agreement provide the CB with a right to do so.

6. Link to Paris Agreement – NDCs and corresponding adjustments

51. Pursuant to Article 4 of the Paris Agreement, each Party must submit its NDC to meet the goals of the Paris Agreement. This generally includes specific strategies for reducing (or limiting) GHG emissions and, in some cases, enhancing removals through carbon sinks. NDCs vary greatly and may be economy-wide or sectoral, expressed in different forms (absolute caps, intensity targets, baselines), but all are anchored to a national emissions inventory reported through the agreed transparency framework (Article 13). Under Articles 4, 6 and 13 of the Paris Agreement, countries that have defined NDCs may participate in authorising cooperative approaches that constitute emissions trading (Article 6.2 and 6.4¹²), and if so, they must undertake corresponding adjustments in their GHG accounting (Article 6 and Article 13) in order to ensure that GHG mitigation outcomes authorised for international transfer (ITMOs) are not double counted and are only counted by the acquiring country or entity.

52. A corresponding adjustment is a bookkeeping correction to a country's GHG emissions inventory as reported in each and all of its initial report, annual report, and biennial transparency report required under the Paris Agreement, whereby the country transferring the GHG mitigation outcome makes an addition to its reported emissions (or subtraction from its removals from sinks) equal to the quantity of ITMOs transferred and the acquiring country or entity subtracts an amount equal to that quantity of ITMOs from its emissions balance when it uses such ITMOs during the relevant Paris compliance period.

53. The nature of the host country's authorisation dictates the timing of the corresponding adjustment. The corresponding adjustment is applied by the transferring country at the point of 'first transfer', which is either (i) the first international transfer when the ITMOs are authorised for use toward another Party's NDC or (ii) at the transferring country's choice of authorisation, issuance, or use, when the ITMOs are authorised for Other International Mitigation Purposes (OIMP).

54. Corresponding adjustments are essential to ensure proper global emissions accounting for GHG mitigation outcomes under the Paris Agreement.

55. Not all GHG mitigation outcomes under the Paris Agreement require a corresponding adjustment. Specifically, Article 6 emission reductions that are not authorised for use toward an NDC or for OIMP, do not require corresponding adjustments. The determination of whether a corresponding adjustment must be applied for a VCC will also depend on the authorisation and use case for the applicable VCC. Specifically, if the transferring country authorises the VCC for use toward another NDC or for OIMP (like CORSIA), corresponding adjustments must be applied. Similarly, certain compliance markets that allow for the use of VCCs may also specify whether a corresponding adjustment must be applied in respect of eligible VCCs. For example, the CORSIA rules require VCCs to be correspondingly adjusted. In order to avoid confusion, entities that are creating VCCs in a country without needing authorisation for use toward another NDC or for OIMP and therefore no requirement for a corresponding adjustment, often seek a letter of acknowledgement that no authorisation is required or a letter of no objection from that country.

56. Where a VCC carries a corresponding adjustment, a label indicating this is generally tagged or otherwise embedded in the unique identifier of that VCC.

57. Many projects are based in countries with undeveloped legal frameworks for the creation of VCCs from project activities. This is distinct from compliance with local laws like permits,

¹² See para. [12] above.

environmental regulations, or building codes, which apply to all development projects. Best practice for all types of project activities requires thorough due diligence and adherence to all relevant laws and regulations and codes of practice; the same applies to GHG mitigation projects. In addition, where a carbon mitigation project is based in a country with an undeveloped legal infrastructure defining frameworks for the creation of VCCs from project activities, the creation of VCCs may not be illegal, however there are concerns that the benefit of such projects in the form of VCCs that hold an economic value could be removed from the country before such legal infrastructure is defined. Best practice would be to ensure complete transparency and cooperation with the relevant government departments to ensure there is agreement on the distribution of the VCCs even without formal authorisation requirements under the Paris Agreement.

7. Tokenisation

58. [Tokenisation in carbon markets uses blockchain to turn traditional carbon credits into digital, tradable assets with the potential for improving transparency, liquidity, automation and accessibility. There are two broad models: (i) native tokens, being VCCs created directly onto a blockchain;¹³ and (ii) tokenised VCCs that mirror an existing registry-based VCC.¹⁴

59. Blockchain's immutable ledger ensures the origin and transaction history of tokenised VCCs are verifiable, addressing concerns about fraud and double-counting in traditional markets. Beyond the VCC itself, blockchain can operate at the project data layer, anchoring MRV data, methodology updates and issuance events to an absolute ledger.

60. Tokenisation provides the potential to fractionalise a VCC, improving market access by smaller buyers or consumers and also enabling more efficient secondary trading, for example between VCCs with different market values.

61. Smart contracts can be embedded into the data of a tokenised VCC, automating key processes such as delivery-versus-payment settlement, conditional transfers, and automatic retirement of VCCs as well as automated data feeds into sustainability reporting systems once a corporate claim is made or a reporting period ends.

62. While tokenisation offers significant potential to enhance transparency, liquidity, and accessibility in carbon markets, issuing a tokenised VCC does not automatically confer legal rights to the relevant original VCC and dealing with the original VCC does not automatically feed data to the tokenised VCC. Successful implementation requires standardised protocols, and strong connections between blockchain platforms and traditional registries and express terms and conditions that recognise the intended link to maintain environmental integrity and prevent double-counting.]

[The above section is subject to the Working Group's consideration and development of a Tokenisation annexe]

8. Summary

63. VCCs are units that have been 'issued' by a CB to represent one tonne of CO_{2e} of GHG mitigation outcome that has been independently verified as removed or reduced by a registered project in accordance with the applicable CCP and methodology. Each CB has its own set of rules and terms of business. A CB may be a government, the UNFCCC Secretariat or a private entity. VCCs are an important tool for providing finance to GHG mitigation projects. Their importance and the size of the potential market is growing as the use case for VCCs expands in compliance and sectoral

¹³ For example Carbon Plant issues and manages blockchain native credits for Planet First and PuroEarth but could include other crediting bodies going forward [Carbon Plant | FSA-Registered Environmental Impact Platform](#).

¹⁴ For example J.P Morgan Kinexys that plugs into traditional registries and tokenises VCCs.

schemes, and as private entities are increasingly incentivised to purchase VCCs to make voluntary contributions to GHG mitigation projects. To facilitate the scaling of the market in VCCs, and consequently provide financing to these projects, it is necessary to ensure the issues relating to private law are clear. It is important to have clear rules that apply to the key aspects of these transactions (briefly described in Introduction paragraph 65). Without predictable results, the transactions will have inherent risks and inefficiencies and there will be greater costs and a reduction in the value of the transactions in commerce.

D. The relationship of the Principles to national domestic law

64. The Principles are designed to provide guidance to States as to private law rules that, if they become part of a State's national domestic law, will facilitate the voluntary carbon market in that State. If many States include these rules in their private law, it is expected that global carbon markets will grow efficiently, both because of the design of the rules and because of the benefits of harmonisation of the private law in this area. The greater the consistency among States, the greater the predictability in cross-border transactions. The increased predictability should reduce the costs of these transactions, both in direct transaction costs and pricing. It is therefore recommended that States adopt legislation consistent with these Principles.

65. It is, however, up to a State to choose whether or not to include these rules within its private law. How that inclusion can take place is addressed in the following paragraphs. The Principles are designed as a whole, so that the maximum benefit to the market will flow from their holistic implementation. It is, though, possible for a State to include only some of the rules of the Principles in its private law, and to omit others. While this is less than optimal, it may be better than not including any of the rules, since the inclusion of some rules will increase legal certainty and aid harmonisation. However, a State going down this route should consider this decision very carefully [since business within the carbon markets might then flow to States that have implemented the Principles more holistically].

66. The focus of the Principles is on private law rather than regulatory law. Within private law, the Principles focus on the property law aspects of such transactions, leaving parties free to agree on whatever contractual arrangements they wish that are in accordance with the law governing those contracts. Even in relation to property law, the Principles do not provide a complete code, but focus on key aspects where the application of legal rules is currently uncertain or is omitted altogether from existing law in many jurisdictions. For example, the Principles provide that a VCC can be the subject of proprietary rights, set out the circumstances in which an innocent acquirer of a VCC takes free of conflicting claims, and set out methods whereby a security right in a VCC can be made effective against third parties in addition to methods under existing national law. The limited legal scope of the Principles enables them to be fitted into a State's existing private law with minimal disruption.

67. Thus, these Principles cover only a specific area of private law, and there are many issues of private law which are not addressed by the Principles. Certain areas of law are not addressed by these Principles at all. For example, national domestic intellectual property and consumer protection laws remain unaffected by the Principles. Also, these Principles do not address many issues of national domestic private law relating to contract and property law. Examples of such issues not addressed by these Principles include whether a person has a proprietary right in a VCC, whether a proprietary right in a VCC has been validly transferred to another person (except where the innocent acquirer rule in Principles 7 and 18 applies), whether a security right in a VCC has been validly created, the rights as between a transferor and transferee of a VCC, the rights as between a grantor of a security right in a VCC and the relevant secured creditor, many of the legal consequences of third-party effectiveness of a transfer of VCCs and some of the requirements for, and legal consequences of, third-party effectiveness of a security right in a VCC, the priority of a security right

in a VCC as against other security or property rights, and the enforcement of a security right in a VCC (see Principle 3(4)). In sum, these Principles establish certain core concepts and rules and do not attempt to address all contractual and proprietary issues relating to VCCs covered by the Principles. As States may have a wide range of other laws (in statutes and court decisions), there is no attempt to identify the specific law that may apply. In the Principles, the national domestic law relating to issues that are not addressed by the Principles is called 'other law'. This term includes both private law and other types of law. It is important that a State implementing the Principles considers carefully how the implemented Principles fit with the rest of its other law. Further guidance is given in paragraphs 70-72.

68. These Principles provide that a VCC can be the subject of proprietary rights. The reasons why a VCC can be the subject of proprietary rights are explained in Commentary 3.1 to 3.2, and rely on the attributes of a VCC, namely, that it is individuated, controllable and rivalrous. A VCC represents the verified fact that a mitigation outcome has been achieved, that is, the verified fact that a reduction or avoidance of emissions of GHGs has occurred, or that a removal of GHGs has occurred (see Principles 2(1) and 2(2)). The term 'intangible asset' is used to describe a VCC, making it clear that it is an individuated unit (unlike pure information), but is not tangible. The common nature of all VCCs is the representation of the achievement of a verified mitigation outcome (as defined in Principle 2(2)). However, some VCCs may confer on their holders transferable private law rights (see Commentary 2.4). A VCC can, of course, be the subject of contractual rights, for example, when there is a contract of sale of a VCC. It can also be the subject of other contractual rights relating to the VCC, such as rights conferred in a registry account agreement (see Principle 14(5)). [Further, although some VCCs may be issued as controllable electronic records, such as tokens issued on a blockchain or DLT, they cannot all be characterised as 'digital assets' within the definition in Principle 2 of the UNIDROIT Principles on Digital Assets and Private Law. [Subject to Tokenisation annexe]]

69. [Technology neutrality: to be completed following drafting of the Tokenisation annexe.]

70. These Principles are jurisdiction neutral. They have not been drafted using the terminology of a specific jurisdiction or legal system, and are intended to be applied to any legal system or culture. They are, therefore, intended to facilitate the legal treatment of VCCs in all States, including common law and civil law systems. As a result, it is for the State in question to decide how to implement these Principles into its own law(s) and legal system. Traditionally, common and civil law jurisdictions use different approaches to address new phenomena and to implement supra-national law, and these Principles do not prescribe a specific approach. A State, for instance, might elect to adopt a specific statute that is consistent with, or implements, these Principles as a whole. Alternatively, another State might elect to implement these Principles into existing legislation and amend it as appropriate. In some States, the Principles might provide guidance to enable the law to develop judicially. The Principles thus take no position as to whether their rules should be included in a State's special law on VCCs, incorporated into more general laws, already follow from general laws, or are addressed by a combination of these approaches.

71. In addition, these Principles are organisationally neutral. This means that these Principles take no position as to in what part of the laws of a State the Principles' rules should be included. Thus, a State might wish to implement these Principles into a specific law on VCCs, but a State might also consider one or more of these Principles to follow from rules of general private law, commercial law, or consumer law. The organisational neutrality of these Principles also does not mean that they are intended to be implemented outside of private law. These Principles cover only private law issues relating to VCCs and, in particular, proprietary rights. Thus, they specifically address VCCs where these are the object of dispositions and acquisitions, and where interests in VCCs are to be asserted against third parties. As a matter of principle, they do not cover rules that are to be enforced by public authorities which in many jurisdictions would be called 'regulation' or 'regulatory law'. For instance, these Principles do not cover such matters as when or whether a person must obtain a licence for engaging in activities that concern VCCs. However, jurisdictions may wish to adopt rules

of 'regulatory law', i.e. rules that are to be enforced by public authorities, to accompany and operate in tandem with these Principles.

E. Transition rules

72. If a State implements these Principles by legislation, in general, they would apply only prospectively. This would protect existing transactions and legal relationships. There are some instances where, after a 'grace period', some of the Principles could apply to existing transactions. For example, a secured creditor who made a security right in a VCC effective against third parties by registration before the grace period but who failed to make that security right effective against third parties in accordance with Principle 21 and Principle 22 during the grace period might lose priority, after the end of the grace period, to a subsequent secured creditor who made its security right effective against third parties in accordance with the Principles during the grace period.

[To consider whether to remove this sub-section since, although practically useful, it is more detailed compared to the rest of the section]

SECTION I: SCOPE AND DEFINITIONS

Principle 1

Scope

These Principles address the private law relating to verified carbon credits.

Commentary

1.1 These Principles are meant to provide guidelines for States to align their private laws with best practice and international standards regarding verified carbon credits (VCCs) as defined in Principle 2. Their aim is to foster clarity and uniformity in the private law treatment of VCCs, which is crucial for providing legal certainty and scaling up both primary and secondary markets for these assets. The Principles cover only private law issues relating to VCCs, and, in particular, proprietary rights (in the broad sense as explained in Commentary 3.1). Thus, they specifically address VCCs where these are the object of dispositions and acquisitions, and where rights and interests in VCCs are to be asserted against third parties. The commentary to these Principles may include some recommendations that may be characterised as regulatory law, but the Principles are focused on private law and do not cover rules that are to be enforced by public authorities, such as rules regarding whether a person must obtain a licence for engaging in activities that concern VCCs.

1.2 Moreover, these Principles only address a specific subset of private law issues related to VCCs, while intentionally leaving many others out of their scope. For example, they do not cover matters concerning intellectual property, consumer protection or similar subjects and national law on these and similar subjects remains unaffected by the Principles. Also, the Principles do not address many issues of contract law or property law, see Principle 3(4) and Commentary 3.6–3.10.

1.3 It is important to note that, with the exception of Principle 4, the Principles are to be read as guidelines for the law of a single State, and do not include any conflict of laws rules. Thus, although in practice cross-border issues will arise, the Principles are drafted to be internally consistent as a single national law. Therefore, as set out in Principle 2(22), 'other law' means a State's law to the extent that it is not Principles law.

Principle 2

Definitions

- (1) **'Verified carbon credit' or 'VCC' means a unit that represents the fact that, as at the time of the creation of the VCC, a mitigation outcome of the equivalent to one tonne of CO₂ as a result of a GHG mitigation project has been achieved, if**
 - (a) **A positive verification statement verifies that the mitigation outcome has been achieved;**
 - (b) **The positive verification statement is approved by a CB;**
 - (c) **The unit is credited to an account in a VCC registry;**
 - (d) **The unit is individuated using a unique identifier.**
- (2) **'Mitigation outcome' means one of the following:**
 - (a) **a reduction in and/or avoidance of emissions of GHG into the atmosphere; or**
 - (b) **a removal of GHG from the atmosphere.**
- (3) **'Unit' means an intangible asset.**
- (4) **'GHG' means greenhouse gases.**
- (5) **'Unique identifier' means a number or other unique means of identification that relates to one VCC, or to a block of more than one VCC if a single record in a VCC registry relates to that block.**
- (6) **'Verified' means, in relation to an achievement of a reduction or removal, that a VVB has carried out a verification process resulting in a positive verification statement.**
- (7) **'Positive verification statement', in relation to a VCC, means a statement that a mitigation outcome of the equivalent to one tonne of CO₂ has been achieved as a result of the relevant GHG mitigation project in accordance with the applicable methodology and the CCP.**
- (8) **'Verification process', in relation to a VCC, is a process carried out by a VVB resulting in a verification statement.**
- (9) **'VVB' (validation and verification body) means a legal person that, in respect of a verification process, is approved or authorised by the relevant CB to carry out that verification process and**
 - (a) **is independent of any other natural or legal person**
 - (i) **who has undertaken the relevant GHG mitigation project or**
 - (ii) **who is to become or does become the first registered holder of the VCC to which the verification process relates****and**
 - (b) **produces a verification statement as a result of that verification process.**
- (10) **GHG mitigation project**

- (a) **'GHG mitigation project'** means a project or programme aimed at achieving a mitigation outcome operating under the rules and requirements of a CCP.
 - (b) **'Relevant GHG mitigation project'** means, in relation to a VCC, the GHG mitigation project from which the verified achievement of a mitigation outcome represented by that VCC results.
- (11) 'CB' (crediting body)** means a legal person, a governmental body or an inter-governmental body, that, in relation to a VCC,
 - (a) administers the CCP rules and requirements under which the relevant GHG mitigation project operates, including performance of all of the following functions:
 - (i) approval of the methodology applying to the relevant GHG mitigation project;
 - (ii) approval or authorisation of the VVB that carries out the verification process relating to that VCC;
 - (iii) approval of the positive verification statement resulting from the verification process relating to that VCC;
 - (b) is independent of
 - (i) any other natural or legal person who has undertaken the relevant GHG mitigation project; or
 - (ii) the VVB who carries out the verification process relating to that VCC.
- (12) 'CCP' (carbon crediting programme)** means, in relation to a VCC, the rules and requirements of the relevant CB pursuant to which the relevant GHG mitigation project is registered and carried out, and the VCC is created.
- (13) Methodology**
 - (a) **'Methodology'** means a set of requirements contained in a CCP for the implementation, quantification, measurement, monitoring, reporting and assessment of achievement of the mitigation outcomes of a specific type of GHG mitigation project.
 - (b) The **'applicable methodology'** in relation to a GHG mitigation project means that methodology approved by a CB as the methodology applying to that GHG mitigation project.
- (14) 'Creation'** means the moment when a VCC comes into existence.
- (15) In relation to a transfer of a VCC:**
 - (a) **'transfer'** of a VCC means the change of a proprietary right in the VCC from a transferor to a transferee;
 - (b) the term **'transfer'** includes the acquisition of a proprietary right in a VCC;
 - (c) **'transferor'** means a person that initiates a transfer of a proprietary right in the VCC;
 - (d) **'transferee'** means a person to which a proprietary right in a VCC is transferred;

- (e) the term 'transfer' includes the grant of a security right in favour of a secured creditor, and 'transferee' includes a secured creditor.
- (16) 'Retirement' means a process by which a VCC ceases to be capable of being the subject of a proprietary right as set out in Principle 8.
- (17) 'Cancellation' means the processes by which a VCC ceases to exist or is determined to have never existed.
- (18) 'Overissuance' has the meaning set out in Principle 11.
- (19) 'Revocation' means the circumstances leading to the retrospective cancellation of a VCC, irrespective of the consent of its registered holder, as set out in Principle 10(1).
- (20) 'Voluntary cancellation' is the cancellation of a VCC by its registered holder or a user authorised by the registered holder as set out in Principle 12(1).
- (21) 'Principles law' means any part of a State's law which implements or is consistent with these Principles.
- (22) 'Other law' means a State's law to the extent that it is not Principles law.
- (23) 'Insolvency-related proceeding' means a collective judicial or administrative proceeding, including an interim proceeding, in which, for the purpose of reorganisation or liquidation, at least one of the following applies to the assets and affairs of the debtor:
 - (a) they are subject to control or supervision by a court or other competent authority;
 - (b) the debtor's ability to administer or dispose of them is limited by law;
 - (c) the debtor's creditors' ability to enforce on them is limited by law.
- (24) Words in the singular include the plural and those in the plural include the singular.

Commentary

2.1 The definitions in Principle 2 and Principles 14 and 16 are for the purposes of the Principles only and are not general definitions for any other purpose. They not only facilitate the reading of the Principles but also delineate the scope of the Principles. Each definition sets out the minimum characteristics that the defined concept, thing or person needs to have to fall within the defined word or phrase, and therefore to fall within the Principles. Each defined concept, thing or person is likely to have many characteristics other than those set out in the definition, but the presence or absence of these characteristics may vary, and does not affect whether the concept, thing or person falls within the relevant definition and therefore within the Principles.

2.2 Generally, words defined in these Principles are defined in the singular, for ease of drafting. However, as Principle 2(24) points out, the singular includes the plural. Normally a number of VCCs are created at the same time, since the mitigation outcome of a GHG mitigation project will be equivalent to more than one tonne of CO₂. For example, a project may remove GHGs equivalent to 1000 tonnes of CO₂ from the atmosphere, and as a result 1000 VCCs (or a smaller number of VCCs) will be created. The Principles apply to those VCCs in the same way as they apply to one VCC. It is

not strictly necessary for one VCC to represent the verified fact that a mitigation outcome equivalent to one tonne of CO₂ (as opposed to any other specific quantity) has been achieved in order for that VCC to be capable of being the subject of proprietary rights under Principle 3(1). However, it is more straightforward to express these Principles in terms of a standard size of unit, namely one tonne. In these Principles and commentary, all references to a tonne or tonnes are to a metric tonne or tonnes.

VCC

2.3 The definition of a VCC in Principle 2(1) is designed to reflect the nature of a VCC as an intangible asset (see Principle 2(3) and Commentary 2.7) that comes into existence as a result of the process that is described in paragraphs 24-36 of the Introduction. The events leading up to the creation of a VCC are important, and in most cases, necessary precursors to the existence of that VCC. However, the VCC itself represents the verified fact that, as a result of these events having taken place, a mitigation outcome (as defined in Principle 2(2)) equivalent to one tonne of CO₂ has occurred.

2.4 The definition in Principle 2(1) lists only those facts and events that are necessary (as a matter of Principles law) for a VCC to exist. Depending on the circumstances, a VCC may confer private law rights, such as transferable contract rights against specific parties.

2.5 The definition of a VCC in Principle 2(1) includes a number of terms defined in subsequent Principles, each of which refers to an element that must be present for something to be a VCC. If something is a VCC, the Principles apply to it; it therefore can be the subject of proprietary rights (as defined broadly in Commentary 3.1) and can be transferred (see Principle 6), used as collateral (see Principle 20), held in custody (see Principle 16) and so on. If something falls outside the definition, then it is not covered by the Principles, even though the term 'VCC' may be used colloquially to refer to it. As far as the Principles are concerned, such a thing is governed by 'other law' (see Principle 2(22)).

2.6 The following paragraphs in the Commentary explain the definition in Principle 2(1), including the terms that are used in this definition. The terms used (many of which are defined) are defined for the purposes of the Principles, and not for any more general purpose.

2.7 A VCC is defined as a 'unit', which is itself defined as an 'intangible asset' (Principle 2(3)). The term 'intangible asset' is familiar in many jurisdictions, with roots tracing back to the Roman law concept of *res incorporales* and makes it clear that a VCC is not a tangible or corporeal thing. The use of the term 'unit', which is a word used for an individual thing, makes it clear that a VCC is individuated. This individuation is one of the important characteristics of a VCC that enables it to be the subject of proprietary rights (these characteristics are further discussed in Commentary 3.2).

2.8 A crucial element of the definition of a VCC is that it 'represents' the fact that a mitigation outcome of the equivalent of one tonne of CO₂ has been achieved at the time the VCC is created. A mitigation outcome is defined in Principle 2(2) as consisting of one or both of two things. The first is a reduction in emissions of GHGs into the atmosphere and/or an avoidance of such emissions. The second is a removal of GHGs from the atmosphere. The mitigation outcome can relate to any of a number of GHGs, but is measured in relation to the equivalent to one tonne of CO₂. The calculation of this equivalence is further described at paragraph 31 of the Introduction. The acronym 'GHG' means greenhouse gases (Principle 2(4)). This term has the same meaning as under the UNFCCC, namely 'gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation' and includes carbon dioxide and methane. The term means greenhouse gases, comprising the seven gases listed in the Kyoto Protocol (as amended by the 2012 Doha amendment): carbon dioxide (CO₂); methane (CH₄); nitrous oxide (N₂O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF₆); and nitrogen trifluoride (NF₃). For purposes of these Principles, GHGs are measured in tonnes of CO₂ equivalent.

2.9 A VCC represents the fact that there has been a verified achievement of a mitigation outcome. It represents the fact that this state of affairs existed at a particular moment in time, namely, the time of creation of the VCC (see Principle 2(14) and Principle 5). It is therefore necessary that the conditions in Principle 2(1)(a) and (b) (discussed below) are met for a VCC to exist, as the fulfilment of these conditions means that the state of affairs existed at the time the VCC is created. However, the VCC does not represent the mitigation outcome itself, nor its continuing existence. Once it is created, the VCC represents the factual position as at the moment of creation, and subsequent factual changes in relation to the existence of the mitigation outcome do not affect the existence of the VCC, although they could affect its value and its potential use (see Commentary 2.10).

2.10 The conception of a VCC as representing the fact that there has been a verified achievement of a mitigation outcome at the time of its creation has the consequence that the existence of the VCC as the subject of proprietary rights (the property law nature of a VCC) is separate from the ongoing environmental integrity of the VCC (which can be addressed by market techniques and/or regulatory law as explained in Commentary 2.11). This separation is seen in the reversal situation described in this paragraph and the overissuance situation described in Commentary 2.36 and in Principle 11. As explained in Introduction paragraphs 46 - 47, events may occur that result in some mitigation outcomes relating to a relevant GHG mitigation project being reversed. Examples of a reversal are where GHGs sequestered by a GHG mitigation project escape back into the atmosphere, or where a forest that removes GHGs from the atmosphere burns down and releases GHGs back into the atmosphere. Since a VCC represents the fact of the verified achievement of a mitigation outcome at the time of the creation of the VCC (as explained in Commentary 2.9), a reversal does not affect the existence of the VCC as something that is capable of being the subject of proprietary rights. It might, however, affect the value of that VCC. While an owner or buyer of such a VCC would still be able to retire it, on retirement, however, that person would not be able to 'claim' the environmental benefit of the mitigation outcome that was achieved at the time the VCC was created. As that mitigation outcome has been reversed, in the absence of any remediation, there is no environmental benefit for that person to claim. That person will not, in the absence of any remediation, be able either to use such a retirement to comply with a compliance scheme, or to make a statement about their commitment to net zero. Thus, once the reversal is known, the unretired VCC would become much less attractive to buyers, and its market value would decrease, and in some cases it could become worthless.

2.11 For this reason, as explained in the Introduction, reversals (and overissuance, see Commentary 11.9-11.10) are often addressed by the rules of the CB and/or the CCP by providing for a process of remediation designed to maintain the value of VCCs created by that CB. One type of such remediation process is a buffer pool, another is voluntary cancellation (both are described in Introduction, paragraphs 47 and 50). The rules of the CB and/or the CCP therefore perform the function of maintaining the value of the VCC by maintaining its environmental integrity, which is important for a well-functioning market in VCCs. It would also be possible for remediation to be mandated by regulatory law. In the absence of remediation, it would also be possible for contractual arrangements, such as insurance or the imposition of liability on a contracting party, to mitigate the loss caused by the reduced value of the VCC.

2.12 The separation of the existence of the VCC from matters arising after its creation that affect its value (in the case of a VCC, its environmental integrity) is not without precedent in other types of assets which are capable of being the subject of proprietary rights. Patents and registered designs illustrate the pattern. TRIPS Article 27(1) requires patents to be available for inventions that are new, involve an inventive step, and are capable of industrial application; these conditions are tested against a prior-art universe that is fixed at the effective filing date (or priority date, where claimed), and the twenty-year minimum term of protection is counted from the filing date (TRIPS Article 33). Disclosures arising after the effective filing date do not retroactively destroy novelty or inventive step. Registered designs are structured along the same temporal logic. Under TRIPS Article 25(1), Members must provide for the protection of independently created industrial designs that are new or

original; novelty and originality are assessed as of the design's effective filing date (or priority date, where claimed), with a minimum term of protection of ten years (TRIPS Article 26(3)). Disclosures arising after that date do not retroactively defeat the design's novelty or originality. The way in which the Principles address the position subsequently demonstrated, after the creation of a VCC, that the mitigation outcome it represents was not in fact achieved at creation, is set out in Principle 11 (Overissuance) and, where the deficiency results from deliberate wrongdoing or amounts to a complete nullity of the creation, in Principle 10 (Revocation).

2.13 As mentioned above, the four conditions in Principle 2(1)(a) to (d) are necessary for a VCC to exist. The following seven paragraphs discuss the four conditions in Principle 2(1) that must be fulfilled for a VCC (as defined) to exist.

2.14 The first condition is that a positive verification statement verifies that the mitigation outcome has been achieved (see Principle 2(1)(a), 2(6), (7) and (8) and see Commentary 2.21; Introduction paragraphs 28-32). This is because a VCC represents the fact of a *verified* achievement of a mitigation outcome. A positive verification statement is one that results from a defined process (see Principle 2(8)) carried out by a VVB (defined in Principle 2(9)). Moreover, the mitigation outcome must have occurred as a result of a GHG mitigation project. This requirement reflects the reality that the creation and sale of a VCC is one of the methods by which GHG mitigation projects can be financed. The fact of a mitigation achievement that was achieved by means other than a GHG mitigation project would not be able to be represented by a VCC (as defined). The phrase 'GHG mitigation project' is defined in Principle 2(10).

2.15 The second condition that must be present for a VCC to fall within the definition is that the positive verification statement must have been approved by a CB (defined in Principle 2(11); Introduction paragraph 30, Commentary 2.24). A CB may choose to make its approval decisions based on particular criteria, such as that a certain level of assurance is provided by the VVB in the positive verification statement. Approval is the process by which the positive verification statement results in the registration of the VCC. Registration in this context means that the VCC is credited to an account in a VCC registry (see Commentary 2.17). While approval may, [and often does] take place very shortly before or even contemporaneously with registration of a VCC, it is conceptually distinct. Approval, or sometimes the collective process of approval and instruction to register, is often referred to, colloquially, as 'issuance' (see Introduction paragraphs 33-36). Given its ambiguity, the word 'issuance', however, is not a defined word and is not used in the Principles themselves. Principle 5(1) sets out when a VCC is created, that is, when it comes into existence.

2.16 The CB who approves the report could be the same legal person that runs the registry (the 'registry operator', see Principle 14(2)) although in these Principles these two entities are treated as distinct since they have very distinct functions. If, as may be the case, the CB is a different legal person from the registry operator, the distinction between approval and registration is clear. For a unit to be a VCC, approval of the positive verification statement by the relevant CB is a necessary precursor to registration.

2.17 The third condition that must be present for a VCC to fall within the definition is that the VCC must be credited to an account in a VCC registry. Registration enables a VCC to be controllable, and also rivalrous; these are attributes that are important for a VCC to be able to be the subject of proprietary rights (see Commentary 3.2). The term 'VCC registry' is defined in Principle 14(1). Who actually instructs the registry operator to record the VCC will vary. It could be the CB (defined in Principle 2(11)) who has approved the verification statement or, depending on the rules of the CB, the project proponent could be entitled to instruct the registry to register the VCC once the verification statement has been approved (see Introduction paragraph 33). The identity of the person instructing the registry operator does not matter as long as registration takes place. The instruction could be in any form. For example, it could be an electronic confirmation of a pre-programmed request or even could be by the operation of a smart contract. As mentioned above, the Principles

are drafted in the singular, and refer to one single VCC, but, as mentioned in Commentary 2.1, it is likely in practice that a positive verification statement will relate to the verified achievement of a mitigation outcome of a number of tonnes of CO₂ equivalent, and therefore a number of VCCs will be the subject of one instruction. That quantity of VCCs will therefore be created at the same time (see Principle 5).

2.18 The fourth condition is that the VCC must be individuated by a unique identifier, such as a serial number. [The unique identifier is likely to be given to the VCC at the time of registration by the registry operator, but the definition is drafted so that this need not be the case.] Registration together with having a unique identifier means that a VCC has the characteristics of being identified and individuated. These characteristics are attributes that, in conjunction with other attributes, enable a VCC to be the subject of proprietary rights (see Principle 3(1) and the detailed discussion in Commentary 3.2).

2.19 However, as set out in Principle 2(24), the singular includes the plural in these Principles. Thus, if a block of a specific number of VCCs is given one unique serial number or other identifier, that block is individuated and can be the subject of proprietary rights. If, when that block is split up into smaller blocks or individual VCCs, a unique serial number is given to each smaller block or individual VCC, each smaller block or each VCC is then individuated. This splitting can occur if, for example, a block of 100 VCCs is credited to the registry account of A, and subsequently 50 of those VCCs are debited from A's account and credited to the registry account of B and 50 of them are debited from A's registry account and credited to the registry account of C. Each block of 50 is then given a unique identifier, and B and C can each have proprietary rights in each block. If C then transfers one VCC from the block to D, and that one VCC is given a unique identifier, that VCC is individuated and capable of being the subject of proprietary rights, so that D can have a proprietary right in that one VCC. This point is further clarified in Principle 2(5). [Care needs to be taken during this splitting process to make sure that there are no rounding errors or double counting. A state could consider requiring measures to be taken as a matter of regulatory law to avoid these outcomes.]

2.20 Furthermore, as is made clear in Principle 14, a VCC is registered in a VCC registry by crediting it to an account of a person (a 'registry accountholder' as defined in Principle 14(4)), whereupon that person becomes a 'registered holder' of the VCC. Thus, the VCC is able to be controlled in the way described in Commentary 3.2, which is another attribute that enables a VCC to be the subject of proprietary rights.

Verified

2.21 A verification process is a process carried out by a VVB (see Principle 2(8) and Commentary 2.14) to confirm that the stated mitigation outcome has in fact been achieved as a result of the GHG mitigation project in accordance with the methodology. See also Introduction paragraphs 28–32. As a result of the process, the VVB will produce a statement that concludes (a) that a mitigation outcome measuring the equivalent one tonne of CO₂ equivalent has taken place in the course of the GHG mitigation project (a positive verification statement), (b) that although a positive verification statement cannot be produced, it could be if certain elements were remediated (a statement with corrective action requests), or (c) a statement that a mitigation outcome has not occurred (a negative verification statement). The statement will [typically] give reasons for this conclusion. The mitigation outcome is verified if the verification statement reaches the first of these conclusions, that is, that it is a positive verification statement. The definition of a positive verification statement in Principle 2(7) makes this clear. It should be noted that, although conclusion (a) is couched in terms of a mitigation outcome of the equivalent of a single tonne of CO₂ equivalent, thus relating to a single VCC, a verification statement can, and often does, relate to a stated number of tonnes of CO₂ equivalent.

VVB

2.22 A VVB (validation and verification body) is a legal person who carries out a verification process (see Introduction paragraph 29). A legal person is a person with legal personality, such as a company, but is not a natural person (a human being), although the legal person will use natural persons, such as employees, to carry out the verification process. There are three requirements for a legal person that carries out a verification process to be a VVB as defined. First, it must be approved by the relevant CB (see Commentary 2.15). The second is the only required characteristic for a VVB, even though a VVB is likely to have many characteristics (such as being an expert in a particular field). This characteristic is that the VVB is independent of any person who has undertaken the relevant GHG mitigation project (such as the project proponent or project developer, see Introduction paragraph 25), or who is to become or does become the first registered holder of the VCC (while this would often be the project proponent, it could also be a funder). This independence is such a critical part of the system relating to VCCs that it is part of the definition of a VCC; this means that something representing a mitigation outcome that has been verified by a non-independent VVB is not a VCC within the Principles. It is also best practice for the VVB to be accredited, by a [recognised accreditation body], to carry out such verifications. The third requirement is that the VVB produces a verification statement as a result of the relevant verification process. As mentioned in Commentary 2.21, a verification statement can be positive or negative, although only a positive verification statement can lead to the creation of a VCC.

GHG mitigation project

2.23 As mentioned above, it is only if the mitigation outcome results from a GHG mitigation project that its verified achievement can be represented by a VCC as defined in the Principles. The definition of a GHG mitigation project in Principle 2(9) makes it clear that a GHG mitigation project is one aimed at a mitigation outcome. The term 'GHG project' also includes a programme (such as a jurisdictional programme) (see also Introduction paragraph 19). The way in which a GHG mitigation project is typically developed and carried out is described in detail in the Introduction paragraphs 24-32.

CB

2.24 A CB (crediting body) is defined in Principle 2(11). A CB is a generic term for an entity that administers crediting programmes. Different types of entities, such as legal persons and governments, can be a CB (see Introduction paragraph 20). The functions of a CB are described in the Introduction, and a CB typically carries out many types of activities. However, it is only if the three activities listed in Principle 2(11) are carried out by an entity that it is a CB for the purpose of these Principles. These required activities are: (a) in relation to the relevant GHG mitigation project (the project from which a particular VCC emanates), approving the applicable methodology; (b) in relation to the verification process, approval or authorisation of the VVB who carries out that process; and (c) approval of the positive verification statement resulting from that process. Other functions that are typically carried out by a CB include: developing methodologies, publishing details of accepted methodologies, setting rules of crediting programmes, such as CCPs, validating projects and recording project details in the project registry, instructing a VCC registry to register one or more VCCs and cancelling a VCC in accordance with the rules of the CB and the CCP. Some of these activities predate the verification process, and therefore, while they are very important as part of the background to the creation of a VCC, are not directly relevant to the Principles. The independence of a CB from the activity leading to the mitigation outcome (and the benefit arising from that activity, namely, the mitigation outcome itself) is important to the integrity of the system. The Principles therefore provide that a CB, as defined, must be independent from any person who has undertaken the relevant GHG mitigation project. For there to be genuine approval of a positive verification statement, it is important that a CB be independent from the person generating that statement, and so the CB must also be independent from the relevant VVB.

CCP

2.25 A CCP (carbon crediting programme) is a type of crediting programme developed by a CB. It consists of rules and requirements under which GHG mitigation projects operate and VCCs are created. A CB may have other types of crediting programmes (such as a biodiversity programme) under which other types of environmental projects operate (see Introduction paragraph 20).

Methodology

2.26 The definition of a methodology makes it clear that it is a set of requirements relating to the achievement of a mitigation outcome by a GHG mitigation project. It covers not only how the project is to be implemented, but also how it is to be monitored, quantified and assessed. For a detailed description of a methodology, see Introduction paragraph 24. As mentioned above, a methodology will usually be developed, or at least approved, by a CB. The term 'applicable methodology' is also defined as the methodology that applies to the GHG mitigation project as a result of which the achievement of the mitigation outcome represented by the VCC occurs. In relation to a particular VCC (or VCCs) the verification process relates to the 'applicable methodology'.

Creation

2.27 Creation refers to the moment when a VCC comes into existence. A VCC comes into existence when it is recorded in the VCC registry that the VCC or a block of VCCs has been credited to an account in the VCC registry (Principle 5(1)). When a VCC is created, Principle 3(1) applies and the VCC can be the subject of proprietary rights (see Commentary 5.1).

Transfer

2.28 A transfer, as defined in Principle 2(15), means the change of a proprietary right in a VCC from one person (a 'transferor') to another (a 'transferee'). This concept is functional and intentionally broad, encompassing all types of proprietary rights, whether in whole or in part. It includes not only the transfer of full ownership rights, but also the transfer of limited proprietary rights such as usufruct or other partial rights recognised under national law.

2.29 In these Principles, the term 'transfer' is also used to denote the grant of a security right in favour of a secured creditor, and consequently, a 'transferee' includes a secured creditor. It is important to note that this broad use of 'transfer' is purely definitional within the context of these Principles. It does not imply that the grant of a security right necessarily constitutes a transfer of ownership or any other proprietary right under applicable national laws. This approach aligns with other international instruments, such as the Hague Securities Convention, which in Article 1(1)(h) defines 'disposition' to include both outright transfers of title and grants of security interests, whether possessory or non-possessory.

2.30 A transfer as defined here, i.e. a change of a proprietary right in a VCC, must be distinguished from a change in the registry account to which a VCC is credited. A change in the registry account to which a VCC is credited may or may not be associated with a transfer of proprietary rights. A custodian (as defined in Principle 16(3)), for instance, may have a VCC credited to its registry account for the benefit of a client, but will typically not acquire 'ownership' (as defined under the applicable national law) of that VCC. Conversely, a transfer of proprietary rights may or may not be accompanied by a change of registry account to which the VCC is credited. A State's law, for instance, may provide that under certain circumstances a proprietary right (such as ownership) in a VCC may pass to another person while it remains credited to the same account. An example of this could be a court-ordered transfer of ownership in a divorce settlement, where the VCC remains in the original account but legal ownership changes.

2.31 These Principles do not exhaustively prescribe the conditions for a proprietary right in a VCC to be validly transferred to another person. Although Principle 7(4) prescribes the conditions for a transferee to qualify as an innocent acquirer, these Principles do not dictate all the requirements for a valid transfer of a VCC. For instance, they do not specify whether an agreement in a particular form is required, or consideration is necessary for the transfer, or if authorisation from any regulatory bodies is required for the transfer to be valid. These and other specific requirements for a valid transfer are left to other law (see Principle 2(22)), which may vary across jurisdictions.

2.32 The term ‘transferor’ is defined as ‘a person that initiates a transfer’ because [the person may have the power to transfer greater rights than the person has]. [Indeed, a person to whose account a VCC is credited may have no rights at all but under Principle 7 has the power to transfer rights to an innocent acquirer (see Principle 6(2) and Commentary 6.2 to 6.4)].

Retirement

2.33 Upon retirement, a VCC is no longer capable of being the subject of proprietary rights (Principle 2(16)), and the VCC registry records the VCC as retired, so that it can no longer be moved from one registry account to another. The effect of retirement is very similar to that of cancellation, but it is treated distinctly in these Principles because it is the final stage in the intended lifecycle of a VCC. See Introduction paragraphs 44-45 for a description of the place of retirement in the life cycle of a VCC. Although the instruction for retirement will be given by the registered holder of a VCC (or an authorised user), the registered holder may or may not have a proprietary right in that VCC, for example, the registered holder may be acting as a custodian (see Principle 16). In such cases, the registered holder will be acting as an authorised agent or under other functionally similar legal principles (see Commentary 8.4). A registered holder might choose to retire a VCC for a number of reasons. The Principles are neutral on the reason for retirement. For a description of some typical reasons for retirement see Introduction paragraph 45.

Cancellation

2.34 Before dealing with revocation, overissuance, and voluntary cancellation, it is helpful to explain cancellation (Principle 2(17)), since cancellation is the umbrella concept that is the opposite of creation: when a VCC is cancelled it ceases to be, or is determined never to have been, the subject of a proprietary right (see Principle 9). Revocation and voluntary cancellation are processes that result in a VCC being cancelled. Cancellation may be prospective or retrospective, depending on the process. Voluntary cancellation is prospective (‘ceases to exist’); revocation is retrospective (‘is determined to have never existed’). The precise timing of each process is dealt with under its respective Principle: Principle 10(4) for revocation and Principle 12(2) for voluntary cancellation.

Revocation

2.35 A revocation leads to the cancellation of a VCC. Unlike voluntary cancellation, which is prospective, cancellation for revocation is retrospective: the VCC is treated as having been void from the outset and as never having been the subject of proprietary rights (see Principle 10(4), read with Principle 9). Revocation does not depend on the consent of the registered holder. It is available on two grounds only, set out in Principle 10(1): where the VCC was created as a result of deliberate wrongdoing in the verification, approval, crediting, or individuation process; and where the creation of the VCC was a complete nullity. The characterisation of each ground is left to the law of the enacting State (Principle 10(2)). Revocation is to be distinguished from overissuance: where it is subsequently demonstrated, without deliberate wrongdoing, that the mitigation outcome was not in fact achieved at creation, but the constitutive acts of creation took place, the case is one of overissuance under Principle 11, and not revocation. Beyond Principle 9, which deals with the effect

of cancellation generally, Principle 10 and its Commentary set out the proprietary consequences of cancellation for revocation and the other legal consequences that may follow.

Overissuance

2.36 Overissuance (Principle 2(18)) arises where the constitutive acts required for the creation of a VCC genuinely took place, but it is subsequently demonstrated, without deliberate wrongdoing, that the mitigation outcome the VCC represents was not achieved at creation to the extent represented. It is to be distinguished from revocation for deliberate wrongdoing and complete nullity, where a constitutive act was not genuinely present (see Commentary 2.35). Under the base rule in Principle 11(2), overissuance does not lead to cancellation: the VCC continues to be treated as the subject of proprietary rights, and the integrity of the unit is maintained by the rules of CBs and CCPs, by market and contractual mechanisms, and, where applicable, by regulation, rather than by property law. Principle 11 and its Commentary set out this rule, the policy reasons for it, and an alternative approach that an enacting State may adopt.

Voluntary cancellation

2.37 A voluntary cancellation (Principle 2(20)) follows from the instruction of a registered holder (or a user authorised by the registered holder) and thus is dependent on its intent. Although the instruction for voluntary cancellation will be given by the registered holder of a VCC (or an authorised user), the registered holder may or may not have a proprietary right in that VCC, for example, the registered holder may be acting as a custodian (see Principle 16 and Commentary 2.33). In such cases, the registered holder will be acting on agency or other similar legal principles (see Principle 12).

Principles law and other law

2.38 Under Principle 1, these Principles cover private law issues relating to VCCs. They include various rules such as the rule that a VCC can be the subject of proprietary rights, and rules concerning transfer and custody of, and the taking of security in, VCCs. 'Principles law' as defined by Principle 2(21) refers to all the rules in the Principles once they have become part of a State's law, whether by express implementation, or because that State's law is already consistent with them. Within the law of a State, all law that is not 'Principles law' as defined here is referred to in these Principles as 'other law' (see Principle 2(22)). 'Principles law' and 'other law' as defined here together form 'the law'. Other law includes administrative rules and judicially determined law, as well as legislation.

Insolvency-related proceeding

2.39 The definition of 'insolvency-related proceeding' is not meant to provide a general definition of insolvency proceedings but defines the concept only for the purpose of these Principles. A general definition of 'insolvency proceedings' can be found in the UNCITRAL Legislative Guide on Insolvency Law and subsequent insolvency law texts. The definition in Principle 2(23) seeks to include all forms of collective insolvency-related procedures, which may take place in court or out of court, so long as the procedure is aimed at dealing with a debtor's current or immediate financial or economic distress and some legal effect is attached to the commencement of the procedure. This definition captures the new generation of insolvency proceedings whose legal design, often labelled as 'hybrid', features characteristics of both formal in-court proceedings and out-of-court contractual collective workouts. The term 'insolvency-related proceeding', as defined in Principle 2(23), would include full in-court proceedings; proceedings the opening of which entails a limitation in the debtor's ability to manage and/or dispose of its assets outside the ordinary course of its business; and proceedings which merely trigger a temporary stay of enforcement against the debtor's assets necessary for the continuation of the business activity. Hence, unlike other legal texts such as the 2009 UNIDROIT Convention on Substantive Rules for Intermediated Securities ('Geneva Securities Convention') Article (1)(h), a

debtor would find itself in an ‘insolvency-related proceeding’ for the purposes of these Principles even where its assets are not subject to the control or supervision of the court or an administrative authority.

DRAFT

Principle 3

General principles

- (1) A VCC can be the subject of proprietary rights.**
- (2) 'Proprietary rights' includes both proprietary interests and rights with proprietary effects.**
- (3) Principles law takes precedence over other law to the extent that they conflict.**
- (4) Except as displaced by these Principles, other law applies to all issues, including:**
 - (a) whether a person has a proprietary right in a VCC;**
 - (b) whether a proprietary right in a VCC has been validly transferred to another person;**
 - (c) whether a security right in a VCC has been validly created;**
 - (d) the rights as between a transferor and transferee of a VCC;**
 - (e) the rights as between a grantor of a security right in a VCC and the secured creditor to whom the security right is granted;**
 - (f) the legal consequences of third-party effectiveness of a transfer of a VCC;**
 - (g) the requirements for, and legal consequences of, third-party effectiveness of a security right in a VCC;**
 - (h) the priority of a security right in a VCC as against other security rights or other proprietary rights;**
 - (i) the enforcement of a security right in a VCC.**

Commentary

3.1 Principle 3(1) makes it clear that a VCC, an intangible asset as defined in Principle 2, is capable of being the subject of proprietary rights. All the other rules in these Principles are built on this premise. The phrase 'proprietary rights' is deliberately used in a broad sense, reflecting the functional approach of these Principles, which intend to cater for the largest variety of jurisdictions possible (see Principle 3(2)). The term 'proprietary rights' includes both proprietary interests and rights with proprietary effects, that is, rights (or interests) that can be asserted against third parties (persons who are not necessarily contractual parties). For example, in the context of insolvency, an insolvency representative might assert a right or interest in a VCC on behalf of the insolvency estate against third parties, or a third party might assert a right or interest in a VCC against an insolvency representative. The term 'proprietary rights' is not limited to ownership rights or interests or those equivalent or analogous to ownership. The term includes other, more limited, rights or interests, including for example, security rights.

3.2 A VCC (as defined) has attributes that make it possible for it to be the subject of proprietary rights. First, it is individuated: a VCC is registered using a unique identifier. A VCC itself is unique and can be identified. Second, it can be controlled in that a VCC is registered by being credited to an account of a specified registry accountholder (see Principle 14(4)). That registry accountholder (who becomes, on registration of a specific VCC, the 'registered holder' of that VCC, (see Principle 14(6))), is the only person who can instruct the registry to transfer or retire that VCC. Third, a VCC is rivalrous in the sense that if one person 'has' it (i.e. controls it) another does not, and if one person 'uses' it

(for example, by retiring it) another person cannot. Fourth, a VCC can be transferred from A to B by debiting A's registry account and crediting B's registry account. For these reasons, a VCC, although representing a fact (or, to put it another way, information) is susceptible to being dealt with in the same way as other types of assets which are capable of being the subject of proprietary rights and therefore should itself be capable of being the subject of propriety rights.

3.3 While Principle 3(1) states that a VCC (as defined) is capable of being the subject of proprietary rights, it does not prescribe any specific requirements for the acquisition of a proprietary right in a given VCC. Whether a person has a proprietary right in a VCC is left up to 'other law', as is whether a proprietary right in a VCC has been transferred from one person to another, see Principle 3(4).

Principle 3(3)

3.4 To give the rules of these Principles full effect, Principle 3(3) provides that they should take precedence over existing laws of a State wherever they conflict. Consequently, once they have been adopted and implemented into the law of a State, that State should ensure that these Principles (by then 'Principles law' as defined in Principle 2(21)) take precedence over other law (as defined in Principle 2(21)). It is, however, up to a State whether and how to include the Principles in its national law (see Introduction paragraphs 64-70). It will also be up to a State how, within its classification of assets that can be the subject of proprietary rights, that State classifies VCCs.

Principle 3(4)

3.5 Principle 3(4) makes it explicit that other law (as defined in Principle 2(22)) continues to apply to VCCs. For this purpose, Principle 3(4) lists several examples of issues of property law, and also of contract law, that may continue to be addressed by a State's other law. These Principles do not cover those issues, nor do they intend to change or derogate from that other law. The list is not intended to be exhaustive or limitative. Although Principle 2(15) defines 'transfer' (as used in these Principles) as including the grant of a security right in favour of a secured creditor, the list in Principle 3(4) refers separately to transfers and security rights. This is for clarity of exposition, and because Principle 3(4) lists matters to which other law applies.

3.7 The examples in Principle 3(4) of issues that continue to be addressed by other law can be categorised as follows. First, Principle 3(4)(a) concerns the static situation in which it must be determined whether a person has a proprietary right in a VCC. Pursuant to Principle 3(4)(a), the requirements for a (valid) right or interest in a VCC that can be asserted against third parties continue to be a matter of other law. Therefore, and by way of example, whether, in any given factual situation, a person holds a valid right of ownership in a certain VCC, is, as a matter of principle, not regulated by these Principles.

3.8 Second, Principles 3(4)(b) and 3(4)(c) concern dynamic situations of acquisition and disposition of a VCC from the perspective of the transferor and security right provider respectively. If the question arises whether a person has validly transferred a proprietary right, or validly created a security right, in a VCC, Principles 3(4)(b) and 3(4)(c) make it clear that the requirements for a (valid) transfer or creation of a security right continue to be a matter of other law. However, this last statement is subject to some exceptions, where these Principles provide specific rules regarding the transfer of, and third-party effectiveness of a security right in, a VCC (Principles 21, 22 and 23).

3.9 Principles 3(4)(d) and 3(4)(e) make explicit that the relationships between a transferor and a transferee, and between a grantor of a security right and the relevant secured creditor, respectively, continue to be a matter of other law and are not, as a matter of principle, dealt with by these Principles. In some situations and some jurisdictions, these relationships are characterised as primarily contractual in nature. Principles 3(4)(d) and 3(4)(e) provide that the rights between a

transferor of a VCC and the transferee, and between a grantor of a security right in a VCC and the secured creditor, are left to be dealt with by other law, whatever the characterisation of the relationships between those parties.

3.10 As explained above, Principles 3(4)(d) and 3(4)(e) concern the (often contractual) relationships between a transferor and a transferee, and between a grantor of a security right and the relevant secured creditor, respectively. These provisions thus concern *inter se* relationships, i.e. relationships between (contracting) parties. Principles 3(4)(f), 3(4)(g) and 3(4)(h) on the other hand, concern *erga omnes* relationships, i.e. the relationships with third parties. Pursuant to Principles 3(4)(f) and 3(4)(g), whether a transfer and a security right, respectively, can be asserted against third parties, continues to be, as a matter of principle, a matter of other law. In some jurisdictions, the ‘assertability’ of a right or interest against third parties follows from the concept of ‘effectiveness’. Principles 3(4)(f) and 3(4)(g) provide that, whatever the doctrinal context, the requirements for such effectiveness or assertability continue to be, as a matter of principle, a matter of other law, except where the Principles provide other rules (see Principles 7 and 20). The same is true for Principle 3(4)(h) in that priority of a security right in a VCC against other parties’ security rights or proprietary rights is a matter of other law, except where the Principles provide other rules (see Principles 7 and 23).

3.11 Principle 3(4)(i) leaves the enforcement of a security right (a matter which can concern either the relationship between a grantor of a security right and the secured creditor, and the secured creditor and third parties, or both of these) up to other law, except where the Principles provide other rules (see Principle 24).

SECTION II: PRIVATE INTERNATIONAL LAW

Principle 4

Applicable law

- (1) The law designated as applicable by this Principle governs all questions pertaining to proprietary matters, in particular:
 - (a) creation of a VCC as the subject of proprietary rights;
 - (b) retirement and cancellation of a VCC which is the subject of proprietary rights;
 - (c) whether a person has a proprietary right in a VCC and the content of such right;
 - (d) the conditions under which a VCC can be transferred and the effects of a transfer;
 - (e) the requirements of any innocent acquisition and take-free rules with respect to proprietary rights in a VCC.
- (2) The proprietary matters referred to in paragraph (1) do not include:
 - (a) matters related to the carrying out of any underlying carbon mitigation project or to rights and interests in the land and the natural resources;
 - (b) the submission of a VCC for compliance, taxation or regulatory purposes;
 - (c) contractual rights and obligations arising from agreements relating to a VCC;
 - (d) substantive or procedural aspects of insolvency-related proceedings, such as the ranking of claims, the avoidance of a transaction, or the enforcement of rights to an asset. However, the law applicable under this Principle governs the existence of proprietary and security rights in a VCC in insolvency-related proceedings.
- (3) Proprietary matters regarding a VCC are governed by the law of the VCC registry (*lex registri*), which corresponds upon choice to one of the following laws:
 - (a) the law of the State under which the registry operator is incorporated or otherwise organised, or
 - (b) the law of the State in which the registry operator has its statutory seat, or
 - (c) the law of the State in which the registry operator has its central place of administration, or
 - (d) the law of the State from which the VCC registry is maintained.
- (4) The choice may be made in the general rules of the VCC registry or in the account agreements. The existence and validity of the choice is determined by the same law chosen under this paragraph as if the choice were valid.
- (5) In the absence of a choice, the *lex registri* is the law of the State where the

registry operator has its statutory seat or, in the absence of such a seat, its central place of administration at the time of the creation of the VCC.

- (6) The applicable law remains the same regardless of any change in the factors mentioned in paragraphs (3)(a)-(d) and (5). A change of the choice of law under paragraph (3) is effective if the registered holder of the VCC has consented to it, including where such consent is effective in respect of another person having a proprietary right in that VCC. Any change of the applicable law does not affect the right of a secured creditor that has not consented to it.
- (7) Subject to paragraph 8, the creation, [third party] effectiveness, priority, and extinction of a security right in a VCC are governed by the law of the State in which the grantor is located.
- (8) Proprietary rights, including security rights, in a VCC held by a custodian are governed by the law of the custody agreement. In the absence of a choice of law, this law is the law of the State where the custodian maintains the account in which the VCC is recorded.
- (9) [Where a mechanism is set up by States to create VCCs to contribute to the mitigation of greenhouse gas emissions, proprietary matters relating to such VCCs are governed by the law chosen or the rules established by the States.]
- (10) Nothing in this Principle prevents courts from refusing the application of a foreign law that is incompatible with their public policy (*ordre public*).
- (11) Courts may follow overriding mandatory rules, which apply independently of the law otherwise applicable.
- (12) For the purposes of this Principle, 'State' means the State or a territorial unit of a multi-unit State. The 'law' of such State means the rules of law in force in that State other than its rules of private international law.
- (13) This Principle is subject to, and shall be interpreted and applied in a manner that does not conflict with, Parties' obligations under the United Nations Framework Convention on Climate Change, the Paris Agreement, and any related instruments and outcomes, where applicable.

Commentary

General

4.1 Principle 4 sets out a conflict-of-laws rule for VCCs. Its purpose is to enhance clarity and legal certainty in determining the applicable law.

Principle 4(1)

4.2 Principle 4(1) specifies the scope of the applicable law defined under this Principle. The Principle applies irrespective of the technological basis of the registry and thus is technologically

neutral. It provides a one-stop shop for all types of registries, whether electronic, centralised or decentralised. In this way, consistency across different market structures is ensured.

4.3 Like the other Principles, Principle 4 concerns exclusively matters of private law, and within that sphere focuses on proprietary rights. It does not concern other questions, such as contractual law, tort law or regulatory law questions.

4.4 Within these set limits, however, the scope of Principle 4 is broader than that of the other Principles for two reasons. First, the applicable law governs issues in consistency with Principle 3(4), which provides that the substantive Principles may cover issues that fall under 'other law'. Secondly, as Commentary 2.39 highlights, 'Principles law' as defined by Principle 2(21) refers to all the rules in the Principles once they have become part of a State's law, whether by express implementation, or because that State's law is already consistent with them. Since this indicates that the operation of the substantive Principles may differ slightly from State to State, it was felt necessary to identify the law finally applicable in a uniform manner in all cases. Overall, uniformity at the level of conflict-of-laws is essential to promote foreseeability and legal certainty, which are indispensable for creating trust and ensuring the proper functioning of markets. Still, insofar as Principle 4 leads to 'other law', it only determines rules applicable to proprietary issues.

4.5 The scope of the law determined under Principle 4 generally aligns with that of the other Principles in the sense that it focuses on the market on which VCCs are traded and does not concern other questions in the lifecycle of VCCs.

4.6 Principle 4 identifies only the law applicable to proprietary issues relating to VCCs. It does not concern other aspects, such as contractual, regulatory, or tax matters. The term 'proprietary matters' refers to proprietary rights and rights with proprietary effects (see Commentary 3.1). It does not include contractual obligations between parties, such as duties to transfer or deliver VCCs or the consequences of performance or non-performance of contractual obligations. The law identified by Principle 4 is subject to and shall be applied in a manner that is compatible with rights and interests in the land and the natural resources, community rights, Indigenous rights, or human rights. Non-contractual obligations, such as tort or restitutionary claims, are also not covered. Substantive or procedural aspects of insolvency-related proceedings, such as the ranking of claims, the avoidance of a transaction, or the enforcement of rights to an asset, are excluded, except when it comes to determining the existence of proprietary and security rights in a VCC within the proceedings. Since Principle 4, as with the other Principles, addresses aspects of private law relating to the VCC itself, it does not concern matters relating to the carrying out of any underlying GHG mitigation project, nor the legality or the effects of any illegality relating to the GHG mitigation project or to the creation of VCCs, which are matter of other law (see Principle 13 and the related Commentary). The question of which authority has the task or jurisdiction to assess illegality apart from the CB is also a matter of other law.

4.7 Principle 4(1)(a) and 4(1)(b) clarifies that the applicable law will govern the creation of a VCC as the subject of proprietary rights and retirement and cancellation of a VCC which is the subject of proprietary rights. Cancellation may occur through the revocation or voluntary cancellation of the VCC, or in accordance with other law (see Principle 9(1)). For retirement see Principle 8.

4.8 Principle 4(1)(c) addresses the content of proprietary rights in VCCs (see Commentary 3.1). It is not concerned with contractual or non-contractual rights related to the underlying project. That VCCs can be the subject of proprietary rights is already established under Principle 3(1). However, such rights may have a different content, depending on the jurisdiction. How a VCC is classified in a jurisdiction and what types of proprietary rights apply to it will be governed by the applicable law (see Commentary 3.3). This deference to local law ensures coherence and conformity with the legal tradition and the other rules of the State's legal system. The same Principle concerns the

determination of individual proprietary rights in a VCC. The applicable law establishes who has the right to claim, hold, or transfer the VCC in question.

4.9 Principle 4(1)(d) establishes that the applicable law will also govern the conditions under which a proprietary right in a VCC can be transferred to another person. The applicable law determines the legal requirements for the perfection of a transfer, which typically is the precondition for its effectiveness against third parties. Therefore, this Principle includes the rights as between a transferor and a transferee of a VCC. This concerns the proprietary rights between the parties to the transfer, i.e. whether the VCC belongs to the transferor or the transferee, and as of which time the transfer is considered perfected (final). This may be especially relevant where insolvency-related proceedings are opened regarding either of the parties. The same Principle concerns the effects of the transfer vis-à-vis third parties. Such third parties may, for example, be creditors of the transferor or transferee, or competing acquirers.

4.10 Principle 4(1)(e) clarifies that the applicable law also determines the conditions for innocent acquisition and for take-free rules (shelter principle).

Principle 4(2)

4.11 Principle 4(2) lists some matters that fall outside the scope of paragraph 1. The list is not exhaustive, but serves as an illustration and a clarification. The matters that fall outside the scope of paragraph 1 are subject to different conflict-of-law rules. The dividing line is quite bright: Principle 4 covers all questions traditionally characterised as 'property law' and not questions relating to contractual or non-contractual obligations. While issues of characterisation may arise, they are no more complex than in other international and national texts.

4.12 For the avoidance of doubt, Principle 4(2) enumerates matters that do not relate to proprietary aspects of VCCs. Notable are matters related to the carrying out of the underlying carbon mitigation project or to rights and interests in the land and the natural resources; the submission of VCCs for compliance, taxation or regulatory purposes; contractual rights and obligations arising from agreements relating to VCCs as well as non-contractual obligations such as tort or restitutionary claims; and substantive or procedural aspects of insolvency-related proceedings, such as the ranking of claims, the avoidance of a transaction, or the enforcement of rights to an asset.

4.13 The 'insolvency exception', which should be read in conjunction with the broad notion of 'insolvency-related proceedings' in Principle 2(23), covers transfers made either before or after the opening of such proceedings. Accordingly, the law applicable under Principle 4 may be relied upon by the insolvency practitioner or the debtor in possession to dispose of a VCC, provided that the law governing the insolvency-related proceedings permits them to do so with respect to assets falling within the scope of those proceedings. This exception remains neutral as to the place where insolvency-related proceedings are opened. Consistently, Principle 4 is also neutral with respect to the jurisdictional basis for the opening of such proceedings, as well as to the rules that generally determine the law applicable to those proceedings and their effects.

Principle 4(3)

4.15 Principle 4(3) sets out the connecting factors to determine the law governing proprietary aspects in VCCs.

4.16 In the interest of uniformity, predictability and easy tradability, all VCCs recorded in a registry should be governed by the same law. The determination of the applicable law should not be different for single VCCs or blocks of VCCs. Using different laws in such cases might lead to confusion, create contradictions and disappoint legitimate expectations. Moreover, the applicable law should not change over the lifecycle of the relevant VCC. A change in the applicable law over time – such as

when a VCC is transferred to different transferees or ultimately retired – would complicate the situation and reduce transparency.

4.17 Principle 4(3) aims at identifying the law which is most closely connected with the right in question. Traditionally, the applicable law for proprietary rights is determined by a *situs* rule, i.e. the applicable law is based on the physical location of the object to which the right relates. This rule works effectively for tangible assets with a clear physical location.

4.18 VCCs, being intangible assets, do not have such a physical location. Where they are embodied in a paper certificate, the *situs* of the paper could theoretically be used as a proxy for the VCC, but this is rarely, if ever, the case. It is therefore necessary to determine an alternative connecting factor.

4.19 The location of the relevant GHG mitigation project does not lend itself as a connecting factor when it comes to determining the law applicable to proprietary issues in respect of VCCs. VCC registries typically record a variety of VCCs that emanate from projects located in many different States. While it is theoretically possible to apply the local law of each project's location to determine proprietary issues in respect of VCCs, this would have harmful economic consequences for carbon markets. Applying different national laws to VCCs would undermine their fungibility and increase transaction costs, since the law governing each VCC would have to be determined individually in order to assess the conditions for a transfer. When executing the actual transfer, different steps would need to be undertaken in accordance with the specific requirements of the State of the project. In a world with more than 200 different private law systems in which GHG mitigation projects can be located, this approach would inhibit cross-border trading of VCCs in large international trading venues. The result would be a fragmentation of the market for VCCs into national markets, which lack the depth and liquidity of centralised markets. Investors would either need to navigate multiple national laws themselves or rely on intermediaries to trade for them in the national markets, creating additional expenses. This would make investing in VCCs cumbersome, costly, risky, and unattractive.

4.20 In addition, the law of the place where the relevant GHG mitigation project is located is not closely connected to the issues addressed in Principle 4. While the project location may be important for questions directly related to the project, such as property rights in land, environmental regulations or other conduct required or prohibited in carrying out the project, it has no relevance for proprietary issues in respect of a VCC once the latter has been created. For example, the law of the project's location is irrelevant when determining whether investor A or B owns a particular VCC that has already been issued. The location of the project has no bearing on the trading of VCCs in markets. This does not exclude that the place of the project may be an appropriate connecting factor for other issues, in particular all questions relating to the project itself, such as the legality or the illegality of the project (see Principle 13), and the liability for the issuance of VCCs that do not represent achievements in carbon avoidance, reduction or removal.

4.21 Since VCCs must be recorded in a registry, the VCC registry itself can serve as the central point of reference for determining the law governing proprietary issues. The VCC registry is where the holders of VCCs are recorded and serves as the starting point for every substantive law analysis of proprietary rights in them. The VCC registry is the linchpin of the secondary market for VCCs and is tightly connected to its functioning. Moreover, it is known to all market participants, which ensures the foreseeability of the applicable law.

4.22 A difficulty, however, is that the place of such a registry is not always easy to determine. To illustrate, the server on which the VCC registry is hosted may be located in a country other than that in which operations on the registry are performed. It is also possible that the registry is hosted on multiple servers in different locations. Moreover, certain functions of the registration process may be outsourced to foreign providers.

4.23 Given the uncertainty about the appropriate connecting factor, Principle 4(3) gives parties a limited choice between different connecting factors. The idea is that of party autonomy, which already underpinned Article 4 of the Hague Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary (Hague Intermediated Securities Convention) and Principle 5(1) of the UNIDROIT Principles on Digital Assets and Private Law (the DAPL Principles). In practice, the choice will be made unilaterally, by the operator of the registry in its general rules or in the account agreement. Given the large number of customers, negotiations will rarely be possible, and the individual customers will have no other choice than to take the choice suggested to them or leave the offer altogether. However, this reality of party autonomy is not at all new; it is well-known in other contexts, such as choice-of-law in standard terms of large enterprises.

4.24 Principle 4(3) restricts the parties' choice much more than the Hague Intermediated Securities Convention and the DAPL Principles. It does not allow the choice of any law, as DAPL Principle 5 does; nor does it allow the choice of the law of an office of the registry operator which, alone or together with other offices, is engaged in maintaining the accounts, as Article 4(1)(a) of the Hague Intermediated Securities Convention does. By strictly limiting party autonomy, Principle 4(3) avoids the choice of a legal system that does not bear a substantial connection to the registry operator. This should assuage concerns about the danger of 'applicable law shopping'.

4.25 The choice of law is limited to legal systems that are closely connected with the VCC registry, are foreseeable, and cannot be set up artificially. The available options are the law of the State under which the registry operator is incorporated or otherwise organised, or the law of the State in which the registry operator has its statutory seat, or the law of the State in which the registry operator has its central place of administration, or the law of the State from which the VCC registry is maintained.

4.26 Any of these laws can be chosen. The choice can be made in the VCC registry's general rules, e.g. the rules governing the VCC registry, or in the terms and conditions of the account agreements with individual holders.

4.27 The choice of law in the VCC registry's general rules is binding on the registry operator and all account holders. [This law can only be changed subsequently by following the procedure set out in Principle 4(6).]

Principle 4(3)(a)

4.28 The first available option is the law of the State in which the registry operator is incorporated or otherwise organised. This refers to the jurisdiction where the registry operator has been formally registered as a corporate entity or has otherwise obtained legal personality (see also Hague Intermediated Securities Convention Article 5(2)). Only the operator in charge is relevant here. A service provider to which the services or the operation of the VCC registry have been outsourced is of no relevance.

4.29 **Illustration.** A is a CB incorporated under the law of State X and headquartered there. It organises a VCC registry in which the VCCs it has verified are recorded. A has outsourced the maintenance of the registry, in particular the server management and software updates, to a service provider in State Y. Such outsourcing does not affect the applicable law. Only the law of State X can be chosen.

Principle 4(3)(b)

4.30 The second option is the law of the State of the registry operator's statutory seat. This is the seat identified in the articles of association or by-laws of the registry operator. In many cases, it will coincide with the State of incorporation of the registry operator. However, there may be cases where

the two differ. In such a case, either of them can be chosen since both locations have a close connection to the VCC registry and the VCC recorded therein.

Principle 4(3)(c)

4.31 The third option is the law of the State in which the registry operator has its central place of administration, also referred to as its 'administrative seat' or 'real seat'. This refers to the place where the operator's central management and decision-making occur.

Principle 4(3)(d)

4.32 The last law that can be chosen is the law of the State in which the VCC registry is maintained. This option refers to the place where active entries are made in the registry, i.e. the place where the person carrying out the registration is physically located (see, e.g., Article 9 of the EU Financial Collateral Directive). If entries are made from different States, the relevant State is that in which the lead operator is located, i.e. the person responsible for granting access rights to the registry and maintaining its integrity. The same is true where the operation of the register has been outsourced to a foreign service provider; the latter's law cannot be chosen.

4.33 In case of a decentralised ledger, the VCC registry is maintained in multiple States. In this situation, the operator is the party responsible for creating and managing the distributed ledger for VCCs. In case of a closed or permissioned registry, which is the only one that practically can be used for VCCs, this will be the operating authority that manages access rights or has otherwise set up the registry or the network on which it is stored.

Principle 4(4)

4.34 Principle 4(4) states that the choice among the laws listed in Principle 4(3) can be made in the VCC registry's general rules, e.g. the rules governing the registry, or in the terms and conditions of the account agreements with individual holders. In the latter case, the operator must ensure that the same law is chosen in all account agreements, as otherwise trading would become cumbersome or impossible. The choice of law is offered by the operator of the registry and accepted by the account holders when opening their accounts in the VCC registry.

Principle 4(5)

4.35 Principle 4(5) provides a fallback rule in the absence of an express choice of law. In such cases, the law at the registry operator's statutory seat applies. This connecting factor is preferred because the statutory seat is typically foreseeable and easy to identify by third parties, as it is defined in the articles of association or the by-laws of the registry operator.

4.36 However, there may be cases where a company has no statutory seat, for instance if it is an unincorporated partnership. In this case, the law at its central place of administration should apply.

4.37 The rule in Principle 4(5) ensures that there is always a determinable applicable law. It prevents legal uncertainty where the registry operator has not made an express choice under Principle 4(3).

Principle 4(6)

4.38 The first sentence of Principle 4(6) establishes that the law applicable to proprietary issues in respect of a VCC, as determined under Principle 4(3) or 4(5), does not change where any of the connecting factors used in these provisions changes. For instance, the change of the registry operator's central place of administration does not render the choice of the law of this State void.

4.39 According to the second sentence of Principle 4(6), a choice of law may only be changed with the consent of the registered holder of the VCC. This requirement ensures that the law governing any proprietary rights of the registered holders is not changed against their will. Any other rule would put the position of the registered holders at risk. In the worst case, they could be deprived of their rights by a change of the applicable law. It is an established rule that later changes in the governing law cannot affect the rights of persons who did not consent (see, e.g., in the realm of contracts Article 3(2) 2 Rome I Regulation).

4.40 The law will be changed for all those who have proprietary rights in the VCC who have consented to the change. The proprietary rights of those persons who do not consent will continue to be governed by the formerly applicable law. As a result, two laws may govern the proprietary issues pertaining to VCCs recorded in the same registry. This is a far cry from the potential applicability of all laws of the world, which the project location approach would imply. Normally, obeying two laws should not be too burdensome for the operator; in addition, it will be familiar with both of them. Where the operator considers the burden to be too high, it may withdraw the proposed change of law.

4.41 The expression 'proprietary rights' has the same meaning as defined in Principle 3(2). It includes ownership, limited rights *in rem*, and beneficial ownership under equitable principles. The rule refers to the 'registered' holders of the VCC. This ensures that a change in the law does not create insurmountable obstacles in obtaining consent to the change. There may be persons who are not registered holders but who nevertheless have proprietary rights in the VCC. An example would be a person who has contracted a fiduciary to be registered in its stead. The rights of these non-recorded holders are not visible in the registry. They may be deemed to have authorised the registered holder to consent to the change of law.

4.42 An exception applies to secured creditors, consistent with Article 7 of the Hague Intermediated Securities Convention. This provision protects secured creditors who have not consented to the change in law, by ensuring that the previously applicable law continues to govern certain aspects of their interest, especially the legal nature and effects of their interest. A counter-exception applies if the secured creditor agrees to the change of law.

4.43 Principle 4(6) also applies where the registry is transferred to another operator and a different law would apply as a consequence of that transfer. In such cases, the VCCs will continue to be governed by the law applicable prior to the transfer for those registered holders of proprietary rights in the VCC who did not consent to a change in the applicable law. While this may result in different laws applying to VCCs within the same registry, the receiving registry can mitigate the resulting complexity by creating a separate platform or dedicated accounts to indicate the application of different laws.

Principle 4(7)

4.44 Principle 4(7) introduces a special rule for determining the law applicable to security rights in VCCs. This rule departs from the general rules in Principle 4(3) to 4(5). It provides that the creation, effectiveness against third parties, priority, and extinction of a security right in a VCC are governed by the law of the State in which the grantor is located. This rule aligns with Article 86 of the UNCITRAL Model Law on Secured Transactions, which similarly refers to the law of the security provider's location for security rights in intangible assets.

4.45 This rule ensures legal certainty for creditors protected by security rights. Applying the law of the grantor's location is a well-established principle in secured transactions and enables secured creditors to assess risk more effectively, conduct proper due diligence, and comply with third-party effectiveness requirements such as registration or notification.

4.46 The rule covers legal requirements for establishing a security interest, the process for extinguishing such rights, the legal consequences of the security interest, and the rules determining priority between competing claims. The 'location' of the grantor is the place of the grantor's habitual residence or the (principal) place of business.

Principle 4(8)

4.47 Principle 4(8) contains a distinct rule for proprietary rights in VCCs held by custodians. Rather than following the general registry-based rule, it subjects the proprietary rights to the law chosen in the custody agreement, and, in the absence of a choice of law, refers as a fallback to the law of the State in which the custodian maintains the account in which the VCC is recorded.

4.48 The advantage of this rule is that it allows for the rise of intermediaries in the way in which VCCs are held. To be efficient, such intermediaries must be able to administer all assets under their management according to a single law. This lesson can be drawn from the ways in which intermediated securities and digital assets are held, and is the reason why both the Hague Intermediated Securities Convention (Article 4) and the DAPL Principles (Principle 5(3)) provide for the centralisation of the applicable law at the custody level. Such a special rule allows intermediaries to maintain VCCs recorded in different VCC registries, and become a one-stop shop for investors, which is important if the market is scaling up and the number of registries increases. To cater for such a development, it makes sense to provide for a different law than the one governing each VCC registry. The scope of the rule is restricted to VCCs that are held in custody. It does not cover the acquisition of the VCC by the investor or by the custodian on the investor's behalf, nor the sale of the VCC to another investor who has an account with a different custodian.

Principle 4(9)

4.49 Principle 4(9) addresses the law governing proprietary matters for any VCC mechanism, such as the Paris Agreement Crediting Mechanism, that is established by States, where it may be difficult or impossible to apply the *lex registri* rules of Principle 4(3). Under the Draft Procedure of the Article 6.4 Mechanism Registry dated 23 June 2026, the registry administrator is the UNFCCC secretariat, acting under the supervision of the Article 6.4 Supervisory Body. In addition, some States have established or announced plans to establish national registries operated by State bodies. There is a need to determine a body of law to govern proprietary matters relating to VCCs created under schemes such as the Paris Agreement Crediting Mechanism. Accordingly, Principle 4(9) provides that the law applicable to proprietary matters relating to VCCs created under a mechanism set up by States will be chosen by such States.]

Principle 4(10)

4.50 Principle 4(10) clarifies that the public policy exception, which is a mainstay of private international law, also applies in the context of VCCs. The exception is triggered where the application of the foreign law identified under Principles 4(3)-(8) yields a result that would be incompatible with the most fundamental notions of justice of the forum's legal system. This must be decided on case-by-case basis by assessing the results in the precise situation and does not involve an assessment of the entire foreign law as such. Also, the court should focus on the issues that are governed by the applicable law, i.e. the transfer and acquisition of VCCs, and not on issues not regulated by this law, such as the permissibility or legitimacy of GHG mitigation projects.

Principle 4(11)

4.51 Principle 4(11) highlights that courts may apply overriding mandatory rules. These rules operate independently of the normally governing law according to Principle 4(1)-(5). Examples are restrictive measures (sanctions, embargoes), anti-money laundering, and terrorism financing rules.

Courts are required to follow overriding mandatory rules of the forum. It is also possible for courts to give effect to overriding mandatory rules of other countries, e.g. on the basis of comity.

Principle 4(12)

4.52 Principle 4(12) qualifies the term ‘State’ and ‘law’ in Principle 4. On the one hand, it clarifies that the term ‘State’ can mean a sub-unit of a multi-unit state with independent rules of private law. On the other hand, it is underlined that the expression ‘law’ refers exclusively to the substantive law of a State, and does not include its rules of private international law. This clarification ensures that the law applicable is determined independently of the conflict-of-laws rules of the State whose law is designated by Principle 4.

Principle 4(13)

4.53 Principle 4(13) makes reference to the UNFCCC and the Paris Agreement in order to ensure that Principle 4 does not conflict with the international framework of obligations and mechanisms relating to climate change. This clarification proceeds on the basis that the UNFCCC and Paris Agreement do not, as such, govern proprietary-law issues. Nor does Principle 4 affect the manner in which each State characterises emission reductions within its own legal system. The expression ‘where applicable’ acknowledges that VCCs may be created either within or outside those international frameworks.

SECTION III: CREATION AND TRANSFER

Principle 5

Creation

- (1) A VCC comes into existence when it is recorded in a VCC registry that the VCC or a block of VCCs has been credited to an account in that VCC registry.**
 - (a) Subject to paragraph (b) the registered holder of a VCC at the moment it comes into existence has a proprietary right in that VCC;**
 - (b) If, at the moment that a VCC comes into existence, the registered holder maintains the VCC for a client, that client has a proprietary right in that VCC.**
- (2) After that moment, subject to Principle 7, the question of whether a person has a proprietary right in a VCC is a matter for other law.**

Commentary

5.1 Principle 5(1) specifies the moment at which a VCC comes into existence. While approval of the relevant positive verification statement (see Principle 2(1)(c) and Commentary 2.15) and individuation of the VCC using a unique identifier (see Principle 2(1)(e) and Commentary 2.18) are necessary preconditions of the VCC coming into existence, it does not become a VCC as defined in Principle 2(1) until it has been registered in a VCC registry by being credited to an account in that registry. Typically registration and the allocation of a unique identifier will take place at the same time. At that point, Principle 3(1) applies and the VCC can be the subject of proprietary rights.

5.2 In these Principles, the singular includes the plural (Principle 2(24)). This is for ease and precision of drafting. However, in most, if not all, cases, a GHG mitigation project will achieve a mitigation outcome equivalent to more than one tonne of CO₂. Thus, the positive verification report will relate to a mitigation outcome that will be represented by more than one VCC. In many cases, as mentioned in Commentary 2.19, a block of VCCs will be recorded as credited to one account in the VCC registry. That block may, in some cases, be given a single unique identifier, with a view to new unique identifiers being given to smaller blocks or single VCCs if they are later split from the larger block (see Commentary 2.19). For this reason, Principle 5(1)(a) and (b) refers to a VCC or a block of VCCs. However, the rest of Principle 5 is simplified by referring merely to a single VCC, and the content applies *mutatis mutandis* to each and every VCC in a block.

5.3 A VCC, once it comes into existence, is a new unit (ie a new intangible asset) that has not, previously, been capable of being the subject of proprietary rights. Therefore, there has to be a person who is the first to have a proprietary right in the VCC, and the point of Principle 5(2) is to identify who that person is as a matter of law (see Commentary 5.4). In practice, that person is usually the project proponent, or a key financier or a representative of key financiers, who is then able to sell the VCC and can use the price to fund its financing of the carbon mitigation project (see Introduction at paragraph 33).

5.4 In a situation where the registered holder is not maintaining the VCC for anybody else, Principle 5(2) provides that the person who is the first to have a proprietary right in the VCC is the registered holder (as defined in Principle 14(6)) (see Principle 16(5) for a definition of 'maintain'). If the registered holder maintains the VCC for a client, so that the registered holder is a custodian within the definition in Principle 16(3), Principle 5(2) provides that the client has a proprietary right in the VCC. The relationship between a custodian and a client is covered by Principle 19(1), which

provides that a VCC maintained by a custodian for a client is not available for the satisfaction of claims of creditors of the custodian. How this conclusion is achieved in a State's law will vary. In some jurisdictions, it will be achieved by the custodian (the registered holder) having no proprietary rights in the VCC, while the client does have proprietary rights in the VCC. In other jurisdictions it will be achieved by both the custodian and the client having (different) proprietary rights in the VCC. Principle 5(2) must be read in the light of this analysis. In the former jurisdictions, it will be only the client who has proprietary rights in the VCC, while in the latter jurisdictions both the registered holder (the custodian) and the client will have proprietary rights (but of different sorts) in the VCC.

5.5 It should be remembered that Principle 5(2) only applies at the moment when the VCC comes into existence. As is made clear by Principle 5(3), after that point, all questions of whether a person has a proprietary right in a VCC are governed by other law (see Principle 3(4)). Principle 3(4) is subject to Principles 7 and 18, which set out the circumstances in which a person will take a VCC free from conflicting claims, and which is a matter of Principles law.

5.6 As pointed out in Commentary 2.3, the VCC represents a mitigation outcome that exists as a result of events that have taken place before the VCC is created. These Principles concern aspects of private law relating to the VCC itself, rather than the application of legal rules to the events before the VCC is created, which is a matter for other law (see Principle 2(22) for a definition of 'other law').

Principle 6

Transfer

- (1) Subject to Principle 7, a person can transfer only the proprietary rights that it has in a VCC, if any, and no greater proprietary rights.**
- (2) A transferee of proprietary rights in a VCC acquires all of the proprietary rights that its transferor had or had the power to transfer, except that the transferee acquires rights only to the extent of the rights that were transferred.**

Commentary

Principle 6(1): *nemo dat* rule

6.1 Principle 6(1) embodies the fundamental principle of *nemo dat quod non habet*—no one can give what they do not have. It states the general rule that a transferor cannot convey rights in a VCC that they themselves do not have. However, *nemo dat* is not an absolute proposition within these Principles. It is qualified under Principle 7, which introduces an exception for innocent acquisition. This provision is designed to balance the protection of original owners with the need for transactional certainty and the facilitation of commerce in the context of global carbon markets where legal certainty is paramount.

Principle 6(2): *shelter* rule

6.2 Principle 6(2) embodies the shelter principle: a transferee acquires all the rights of the transferor that were transferred or that the transferor had the power to transfer. In these Principles, the inclusion of this rule clarifies that a transferee's rights are derivative of the transferor's rights. The phrase 'power to transfer' serves to carve out exceptions to the general rule in Principle 6(1) whereby a person can only transfer the rights they have. It acknowledges that, in certain circumstances, private law grants a person the ability to transfer proprietary rights they do not hold themselves, typically to protect the security of commercial transactions and the expectations of innocent parties. A consequence of this derivative principle, which is not always intuitive, is that once a person has taken a VCC free of a conflicting proprietary right (for example, an innocent acquirer under Principle 7), a later transferee acquires that same unencumbered title under Principle 6(2) even if the later transferee knows of the conflicting right. Such a transferee need not qualify as an innocent acquirer in its own right, because it takes the rights that its transferor actually held, and its knowledge is therefore immaterial.

6.3 Despite variations in doctrine and terminology, the following are examples of such exceptions that are widely recognised in both common law and civil law systems. First, an agent who, acting within the scope of their authority, does not have proprietary rights in their principal's property is typically recognised the legal power to transfer the principal's rights to a third party. Second, a transferor who has voidable title (i.e. a title that is valid until avoided but which can be set aside due to circumstances such as fraud, duress, or mistake) is typically recognised as having the power to transfer good title to a purchaser who satisfies determinate requirements (e.g., good faith, taking possession, non-gratuitous transfer) even though the transferor's own title is vitiated. Third, an entrustee who receives property voluntarily from an owner is typically recognised as having the power to transfer rights in that property to a third party who satisfies determinate requirements, even when the entrustee has no such rights and acts wrongfully in disposing of it. Critically, the phrase 'power to transfer' in this Principle is therefore the conceptual gateway to the specific rules in Principle 7, which detail the precise conditions under which an innocent acquirer is protected.

6.4 Principle 6(2) also recognises that a transfer may be limited in scope—the transferee acquires only those rights that the transferor intended to convey through the transfer, not necessarily all rights that the transferor could have transferred.

Principle 7

Innocent acquisition

- (1) An innocent acquirer takes a VCC free of conflicting proprietary rights.**
- (2) No rights based on a proprietary claim relating to a VCC can be successfully asserted against an innocent acquirer of that VCC.**
- (3) An innocent acquirer can acquire a proprietary right in a VCC even if the transferor is acting wrongfully and has no proprietary right in the VCC.**
- (4) In order to qualify as an innocent acquirer, a transferee must:**
 - (a) acquire the VCC from a transferor that is the registered holder of the VCC at the time of transfer;**
 - (b) have the VCC credited to their registry account by the VCC registry operator; and**
 - (c) comply with requirements equivalent to those found in the relevant good faith acquisition and take-free rules as specified by the relevant State.**
- (5) A transferee of a VCC is not an innocent acquirer if the transfer of the VCC**
 - (a) is made by way of gift or otherwise gratuitously; and**
 - (b) is not the grant of a security right.**

Commentary

Principle 7(1)-(3): Innocent acquisition rule

7.1 As stated in Principle 6 and its Commentary, the basic rule of *nemo dat quod non habet* applies to VCCs. However, this is subject to the innocent acquisition rule set out in Principle 7, which serves as an exception to the general rule.

7.2 Principle 7(1) and 7(2) states that an innocent acquirer takes free of conflicting proprietary rights, and no rights based on a proprietary claim can be asserted against an innocent acquirer. Principle 7(3) makes clear that a transferee may qualify as an innocent acquirer even when acquiring a VCC from a transferor who obtained the VCC through wrongful means. Examples include cases in which the transferor obtained the VCC through fraud, breach of fiduciary duty, or unauthorised access to another person's registry account. The rule applies regardless of how the transferor obtained the VCC, provided the acquirer meets the requirements set out in Principle 7(4)-(5).

7.3 The innocent acquisition rule endows VCCs with attributes similar to those of negotiable instruments, negotiable documents of title, and negotiable certificated securities in many common law and civil law jurisdictions. This attribute enhances the transferability and liquidity of VCCs, as market participants can rely on their ability to acquire them free of unknown claims, provided they meet the requirements for an innocent acquisition.

7.4 It is recognised that the result of an innocent acquisition rule is that, in some circumstances, a person with a proprietary claim, who is the victim of wrongful activity, will not be able to assert that claim successfully against the innocent acquirer. The victim would retain a personal claim against the wrongful actor for damages or restitution, but such a claim is unlikely to yield substantial recovery in practice; this is because wrongful actors typically lack sufficient assets or abscond, leaving the victim without effective recourse despite having a valid legal claim. While this could be perceived as inequitable to the original owner, the rule embodies a deliberate policy choice favouring transactional certainty over strict protection of proprietary claims. In international carbon markets, where speed, efficiency, and trust are critical, the innocent acquisition rule provides a mechanism to reduce transactional risk and enhance market confidence. Without such a rule, potential acquirers might hesitate to participate in transactions, fearing hidden claims against VCCs, particularly in a cross-border context where legal systems vary. By prioritising the innocent acquirer's rights, the rule creates a robust and predictable framework for VCC trading, encouraging investment and liquidity in the market.

Principle 7(4): requirements for innocent acquisition

7.5 Principle 7(4) sets out the requirements for a transferee to be an innocent acquirer. The first is that the transferee must acquire the VCC from a transferor that is the registered holder for that VCC. This requirement restricts the scope of the innocent acquisition rule by establishing a crucial qualification for the transferor—only a person who appears as the registered holder of a VCC in the relevant registry can transfer the VCC in a way that triggers innocent acquisition protection. This requirement acknowledges and reinforces the public notice function of registries and their fundamental role as authoritative sources of information in VCC trading. As a practical consequence, any person acquiring a VCC from someone who is not a registered holder must undertake appropriate due diligence to verify the transferor's authority and title to transfer.

7.6 The second requirement is that a transferee must have the VCC credited to their registry account by the VCC registry operator. This requirement serves as a critical public notice mechanism that makes the transfer visible to market participants. Moreover, this registration requirement enables the transferee to subsequently become a transferor capable of initiating another innocent acquisition. The timing of registration is particularly significant as it marks the moment when innocent acquisition protection crystallises. This underscores the central role of registries as the primary source of legally significant information about VCC ownership and transfers.

7.7 It is important to note that the registry's role in crediting VCCs to an acquirer's account does not imply that the registry confirms or warrants title to those VCCs. Registries operate as neutral infrastructure providers that credit and debit accounts in accordance with their terms of service, following instructions from their account holders. The registry requirement in Principle 7(4)(b) serves a public notice function analogous to that of possession in many good faith purchase exceptions across numerous jurisdictions. The action of a registry in crediting a VCC to an acquirer's account is merely an objective criterion for the application of the innocent acquisition rule and does not impose upon registries any duty or responsibility to substantively determine whether a party qualifies as an innocent acquirer. The final determination of whether a transferee meets all requirements to be considered an innocent acquirer remains a matter for the applicable national law.

7.8 The third requirement is that the innocent acquirer must comply with the requirements specified by the relevant State (that is, the State whose domestic law is the applicable law and provided that these requirements align with that State's existing good faith acquisition and take-free rules for other types of assets (see Principle 7(4)(c))). This flexibility allows States to integrate VCC transfers into their existing legal frameworks while maintaining consistency with their treatment of other assets.

7.9 The specific requirements for an innocent acquisition established by national law, sometimes referred to as acquisition *a non domino* (from a non-owner), vary significantly across jurisdictions but often share common principles. In many common law jurisdictions, statutory exceptions to the *nemo dat* principle typically require the acquirer to act in good faith and without notice of any defect in the transferor's title. In cases of entrustment to a merchant, the acquirer may need to qualify as a 'buyer in the ordinary course of business', demonstrating that the purchase occurred through normal commercial channels, pursuant to ordinary practices and customs, and without knowledge of competing claims. Similarly, for an acquisition *a non domino* in many civil law jurisdictions, the law typically requires that the acquirer obtain possession of the movable property, act in good faith (possibly assessed both subjectively based on actual knowledge and objectively based on what a reasonable person should have known), and provide value for the transfer rather than receive it gratuitously.

7.10 It should be noted that the scope of these innocent acquisition principles is subject to important qualifications across legal systems. Most systems do not provide good faith purchaser protections for intangible property such as contractual rights or intellectual property, subjecting them to a strict *nemo dat* regime. Similarly, stolen property is typically excluded from take-free rules in most jurisdictions, thereby preserving the rights of dispossessed owners against innocent third parties. By contrast, money and negotiable instruments generally benefit from particularly generous good faith acquisition rules across jurisdictions, reflecting the policy imperative to preserve commercial certainty and ensure the free flow of currency in economic transactions.

Principle 7(5): exclusions

7.11 Principle 7(5) excludes gratuitous transfers from innocent acquisition protection. This exclusion reflects a long-standing principle found in many legal systems—from the innocent acquisition rules in common law jurisdictions to the *possession vaut titre* doctrine in civil law traditions—that special protection of acquirers against competing proprietary claims should be limited to those who have given value. This approach rests on two key considerations. First, the deprivation of an original owner's rights can only be justified where the acquirer has given value in exchange for the VCC—there is no policy basis for preferring a gratuitous recipient over the original owner's proprietary claim. Second, while the innocent acquisition rule aims to enhance transferability and liquidity in VCC markets by protecting parties engaged in voluntary market exchanges, these market efficiency objectives have no application to gratuitous transfers. Recipients of gifts or other gratuitous transfers must therefore rely on the general rules of transfer under Principle 6, taking only such rights as their transferor had to give. It should be noted that intra-group transfers effected for a variety of internal reasons, including corporate reorganization, tax planning, or other commercial purposes, may not be gratuitous, even where no cash consideration passes at the time of transfer, provided the transaction occurs within a broader commercial framework.

7.12 The Principle makes an exception for transfers related to the grant of a security right (e.g., using a VCC as collateral for a loan). While such transfers might not involve an immediate exchange of value, they are embedded in commercial transactions with underlying obligations. As such, they are not gratuitous and align with the value-driven rationale of innocent acquirer protection. Transferees in these cases may still qualify as innocent acquirers if they meet the requirements set out in Principle 7(4). This carve-out ensures that legitimate secured transactions involving VCCs remain protected as value-generating commercial arrangements. By drawing this distinction, Principle 7(5) maintains the balance between protecting legitimate commercial interests and preserving the rights of original owners against unauthorised dispositions.

Scope limitation of the innocent acquisition rule

7.13 The innocent acquisition rule in Principle 7 does not address issues related to the existence of a VCC. It is not intended to rectify defects that would render a VCC liable to cancellation for

revocation, because it is demonstrated that the constitutive acts were absent or not genuinely present, or were procured by deliberate wrongdoing (see Principle 10 on Revocation). Rather, the innocent acquisition rule is specifically designed to address defects in the transfer of proprietary rights in VCCs. The rule operates on the assumption that the VCC in question is valid and focuses solely on protecting innocent acquirers against competing proprietary claims that might arise in the transfer process.

7.14 Similarly, the innocent acquisition rule does not address situations where a party creates VCCs in breach of contractual obligations or through tortious or criminal conduct. These matters are governed by the relevant laws concerning contracts, torts, and criminal liability. However, once VCCs exist, the innocent acquisition rule applies to protect qualifying transferees, regardless of any underlying contractual disputes or misconduct that may have occurred during their creation or initial registration.

7.15 **Illustration.** Company A is the registered holder of 1,000 VCCs in Registry X. Company B fraudulently induces Company A to enter into a contract for the transfer of these VCCs. Based on this fraudulent contract, Company A instructs Registry X to debit its account and credit Company B's account with the 1,000 VCCs. Company B is not an innocent acquirer because it acquired the VCCs through fraud.

7.16 Subsequently, Company B transfers 500 of these VCCs to Company C, which pays market value and is unaware of the fraud. Company B instructs Registry X to debit its account and credit Company C's account, which Registry X does in accordance with its terms of service. Registry X does not confirm title or warrant that any account holder has good title to the VCCs; it merely follows the instructions of its account holders according to its account terms.

7.17 Later, Company A discovers the fraud. Company A attempts to assert a proprietary claim to recover the VCCs from Company C. Under Principle 7, Company C qualifies as an innocent acquirer because it acquired the VCCs for value, in good faith, from Company B (who was the registered holder at the time of transfer), and had the VCCs credited to its registry account. As an innocent acquirer, Company C takes the VCCs free of Company A's conflicting proprietary claims, notwithstanding that Company B acquired them through fraud. Company A can only take action against Company B for fraud.

SECTION IV: RETIREMENT AND CANCELLATION

Principle 8

Retirement

- (1) A VCC that is retired ceases to be capable of being the subject of a proprietary right even if the VCC registry retains the record of its prior existence after its retirement.**
- (2) A VCC can only be retired wholly and not in part.**
- (3) Upon retirement,**
 - (a) the VCC registry must record that the VCC is retired if it retains a record of its prior existence.**
 - (b) the VCC registry must not comply with any instruction given by the registered holder or a user authorised by the registered holder to move, retire or otherwise use the retired VCC.**
 - (c) the VCC registry no longer owes [the VCC's registered holder] the duty set out in Principle 15(2)(d).**
- (4) The registered holder of a VCC, or a user authorised by the registered holder in relation to a VCC, can instruct the VCC registry to retire a VCC, whereupon the VCC registry must retire the VCC forthwith unless it is exempted from doing so by Principle 15(2)(d)(i) or (ii).**
- (5) A VCC is retired when the VCC registry makes an entry indicating its retirement.**
- (6) Should a VCC be retired in error, the rights and remedies of the parties affected, including the possibility of the restoration of the VCC, is a matter for other law.**

Commentary

8.1 Retirement is the final stage in the intended lifecycle of a VCC (for discussion of the process of, and some possible reasons for, retirement, see Introduction paragraphs 44 to 45). Principle 8(1) provides that upon retirement, a VCC ceases to be capable of being the subject of proprietary rights. It also clarifies that this is the case even if a VCC registry retains the record of the VCC after its retirement, distinguishing a VCC (which can be the subject of proprietary rights) from its mere record following retirement (which is no longer capable of being the subject of proprietary rights). Although Principle 8 refers to a singular VCC, retirements are unlikely to involve singular VCCs. It is important to bear in mind that words in the singular include the plural (see Principle 2(24)).

8.2 Principle 8(2) provides that it is not possible to retire only a part of a singular VCC, thereby ensuring that retirement cannot lead to fractional VCCs.

8.3 Principle 8(3) articulates the consequences of retirement on the relationship between the registered holder of a VCC and the VCC registry. Principle 8(3)(a) provides that if a VCC registry retains a record of a cancelled VCC's existence, it must record that the VCC is cancelled. Principle 8(3)(a) does not prescribe how records are to be maintained. Principle 8(3) should be read with Principle 15(1)(c), 15(6) and 15(7), which sets out the obligations of the registry operator in relation to instructions by its registered holder. Since the VCC ceases to be capable of being the subject of proprietary rights, Principle 8(3)(b) clarifies that it cannot be moved to another registry account nor

can it be retired or otherwise used on the instructions of its registered holder. However, Principle 8(3)(b) makes no reference to instructions by a registered holder to cancel a VCC for revocation because under these Principles the consent of a registered holder is irrelevant to such cancellations (see Principle 2(19)). Principle 8(3)(c) further clarifies that the VCC registry's duty to comply with the instructions of the registered holder or a user authorised by the registered holder no longer applies.

8.4 Principle 8(4) provides that it is the registered holder of a VCC (or a user authorised by the registered holder) that can instruct the VCC registry to retire a VCC. This may or may not be the beneficial owner of a VCC, since a registered holder may be a custodian of the VCC for another person (see Principle 16) or may retire the VCC on behalf of a buyer who wishes to have the VCC retired immediately. Where the registered holder is not the beneficial owner of a VCC, it will instruct the VCC registry either on the basis of agency or some other similar principle allowing the registered holder to act on behalf of the beneficial owner. [In common law systems, for example, custodians will be likely to hold VCCs on trust for the beneficial owner and in these circumstances, it will be trust law principles rather than the law of agency that enables the registered holder to instruct the VCC registry on behalf of the beneficial owner.] Principle 8(4) also provides that the VCC registry is obliged to act on such instruction and retire the VCC in a timely manner. [The Principles do not dictate any particular formality for instructions to retire a VCC. It is up to each VCC registry to stipulate what, if any, requirements it has for such instructions to be validly made.]

8.5 Principle 8(5) specifies that the time at which retirement is effective is the moment that the VCC registry updates its record indicating the retirement rather than some other time, such as the time instructions for retirement are given, providing certainty as to when retirement occurs.

8.6 Some VCC registries issue retirement certificates upon the retirement of a VCC. However, since retirement certificates are not themselves VCCs, Principle 8 does not address such certificates. Where benefits (e.g. tax benefits) may be claimed in relation to the retirement of VCCs, the ability for the beneficial owner of a VCC to assign or allocate such benefits to a third party is beyond the scope of these Principles and is subject to other law, since the ability to do so is a matter for the relevant tax laws and not the result of the retired VCCs having some sort of post-cancellation proprietary existence.

Principle 9

Cancellation

- (1) A VCC can be cancelled because it has been revoked, when it is voluntarily cancelled, or in accordance with other law.**
- (2) A VCC that is cancelled ceases to be, or is treated as never having been, capable of being the subject of proprietary rights even if the VCC registry retains the record of its prior existence after its cancellation.**
- (3) A VCC can only be cancelled wholly and not in part.**
- (4) Upon cancellation,**
 - (a) the VCC registry must record that the VCC is cancelled if it retains a record of its prior existence.**
 - (b) the VCC registry must not comply with any instruction given by the registered holder or a user authorised by the registered holder to move, retire or otherwise use the cancelled VCC.**
 - (c) the VCC registry no longer owes [the VCC's registered holder] the duty set out in Principle 15(2)(d).**
- (5) The effective time of cancellation of a VCC under these Principles will depend on the cause for cancellation.**
- (6) Should a VCC be cancelled in error, the rights and remedies of the parties affected, including the possibility of the restoration of the VCC, is a matter for other law.**
- (7) For the avoidance of doubt, the Principles in Section IV (Retirement and Cancellation) are only intended to affect proprietary rights in relation to VCCs and not contractual rights, which are a matter for other law.**

Commentary

9.1 Principle 9(1) provides that there are three categories of event that lead to a VCC's cancellation under these Principles: revocation (see Principle 10), voluntary cancellation (see Principle 11), and cancellation in accordance with other law. Cancellation for revocation differs from voluntary cancellation in that it does not depend on the consent of the registered holder.

9.2 Principle 9(2) provides that a VCC that has been cancelled ceases to be capable of being the subject of proprietary rights, following the premise of Principle 3(1). It also clarifies that this is the case even if a VCC registry retains the record of the VCC after its cancellation, distinguishing a VCC (which can be the subject of proprietary rights) from its mere record following cancellation (which is no longer capable of being the subject of proprietary rights). Although the cancellation Principles refer to a singular VCC, cancellations, particularly in relation to revocation (see Principle 10) are unlikely to involve singular VCCs, since GHG mitigation projects do not usually result in the issuance of singular VCCs (see Commentary 2.2). It is important to bear in mind that words in the singular include the plural (see Principle 2(24)).

9.3 [Principle 9(3), which provides that there cannot be a cancellation of a part of a VCC, is principally to address the consequences of revocation (Principle 10). Since each VCC represents a

verified achievement of a mitigation outcome equivalent to one tonne of CO₂, any reduction of that achievement to less than one tonne of CO₂ equivalent results in the cancellation of the entire VCC, even where a reduction in, or removal of, GHGs equivalent to a fraction of one tonne of CO₂ equivalent was in fact achieved (for example, 0.99 tonne of CO₂ equivalent).¹

9.4 Principle 9(4) articulates the consequences of cancellation on the relationship between the registered holder of a VCC and the VCC registry. Principle 9(4)(a) provides that if a VCC registry retains a record of a cancelled VCC's existence, it must record that the VCC is cancelled. Principle 9(4)(a) does not prescribe how records are to be maintained. Principle 9(4) should be read with Principle 15(1)(c), 15(6) and 15(7), which sets out the obligations of the registry operator in relation to instructions by its registered holder. Since the VCC ceases to be capable of being the subject of proprietary rights, Principle 9(4)(b) clarifies that it cannot be moved to another registry account nor can it be retired or otherwise used on the instructions of its registered holder. However, Principle 9(4)(b) makes no reference to instructions by a registered holder to cancel a VCC for revocation, because under these Principles the consent of a registered holder is irrelevant to such cancellation (see Principle 2(19)). Principle 9(4)(c) further clarifies that the VCC registry's duty to comply with the instructions of the registered holder or a user authorised by the registered holder no longer applies. Where the cancellation is retrospective (see Principle 9(5) and Principle 10), any records that are maintained should indicate this.

9.5 Principle 9(5) provides that the effective time of cancellation of a VCC depends on the cause for cancellation. Cancellation is generally prospective, taking effect when the VCC registry makes an entry in its records, as in the case of voluntary cancellation (see Principle 12). In the case of revocation, cancellation is retrospective: the VCC is treated as having been void from the outset (see Principle 10).

9.6 Principle 9(6) preserves such rights as a registered holder may have (whether against a VCC registry or a third party) where a VCC is cancelled in error. The nature of such rights (if any) following wrongful cancellation will vary across jurisdictions. Some jurisdictions may provide relief in tort whereas others may do so in restitution. In principle, it should also be open to the parties to contractually agree to a particular solution, subject to any controls on contractual limitations of liability.

9.7 Principle 9(7) clarifies that Section IV of the Principles on Retirement and Cancellation only addresses the proprietary effects of cancellation and does not affect any contractual arrangements that the parties may otherwise have entered into. Contracting parties are therefore free to contractually allocate risks that flow from how cancellation operates as a matter of property. It is, however, distinct from any legal rights that particular VCCs may carry as referenced by Principle 10(5) (see also Commentary 2.4), which deals with rights that follow certain VCCs in respect of which holders may have rights against, for example, the VVB under certain circumstances.

Principle 10

Revocation

- (1) A VCC can be cancelled for revocation where it is subsequently demonstrated that:**
 - (a) the VCC was created as a result of deliberate wrongdoing in the verification, approval, crediting, or individuation of the VCC, with or without deception; or**
 - (b) the creation of the VCC was a complete nullity.**
- (2) The characterisation of conduct for the purposes of paragraph (1)(a), and the circumstances amounting to complete nullity for the purposes of paragraph (1)(b), are determined by the law of the enacting State. The consequences of cancellation for revocation are governed by paragraphs (4) to (7).**
- (3) A VCC can be cancelled for revocation by a CB in accordance with its rules, by a court in accordance with a legally binding order, or by a competent authority determined by other law.**
- (4) A VCC that has been cancelled for revocation is treated as having been void from the outset and as never having been the subject of proprietary rights.**
- (5) Although a VCC was never the subject of proprietary rights once it has been cancelled for revocation, cancellation for revocation does not affect such rights that form part of or relate to the VCC that its holder may have against any parties (if any).**
- (6) When a VCC registry cancels a VCC for revocation, it must make an entry indicating that the cancellation is retrospective to the time of creation.**
- (7) Any cancellation for revocation should be effected in the following order:**
 - (a) in accordance with any valid legal instruction by any registered holder to the registry operator for their VCCs to be cancelled ahead of one or more registered holders;**
 - (b) in accordance with any order established by a project proponent with the approval of a CB in relation to the particular GHG mitigation project at the time of creation and notified to affected registered holders;**
 - (c) in accordance with any order established by a CB in its general rules applicable to GHG mitigation projects generally that have been notified at the time of creation to all registered holders; or**
 - (d) on a pro rata basis among all registered holders of the VCC of the particular GHG mitigation project.**

Commentary

Scope

10.1 Principle 10(1) sets out two grounds on which a VCC can be cancelled for revocation: deliberate wrongdoing in the verification, approval, crediting, or individuation of the VCC; and complete nullity of the creation of the VCC. The grounds are exhaustive. A VCC may only be cancelled for revocation on one of them.

10.2 The grounds form part of a wider scheme. A VCC in respect of which something is later found to be wrong falls into one of three categories, which are mutually exclusive and jointly exhaustive. Where the constitutive acts required by Principle 2(1) were absent, the case is one of complete nullity under Principle 10(1)(b). Where those acts took place but were procured by deliberate wrongdoing, the case is one under Principle 10(1)(a). Where those acts took place, without deliberate wrongdoing, but the mitigation outcome was overstated, the case is one of overissuance under Principle 11, and not a case of revocation. The boundary between the third category and the first two is addressed in Commentary 10.21 to 10.23.

10.3 The existence of liability, or of other consequences, under other law for conduct that is misleading, deceptive, negligent, or careless does not, of itself, bring a case within this Principle. Whether a case is one of revocation depends on one of the two grounds in Principle 10(1). The trigger is the deliberate character of the conduct, or the nullity of the creation; the availability of a remedy elsewhere, with or without a requirement of intention, is a different issue left to other law.

10.4 In these Principles, cancellation for revocation voids the VCC. It is to be distinguished from retirement, which gives effect to a valid VCC by enabling its holder to 'claim' the environmental benefit of the mitigation outcome that the VCC represents (see Principle 8 and Commentary 2.31), and from voluntary cancellation. The compound expression 'cancellation for revocation' is used throughout these Principles, and is not interchangeable with the use of 'cancellation' in some carbon-market schemes to mean retirement or voluntary cancellation.

Deliberate Wrongdoing Principle 10(1)(a)

10.5 Principle 10(1)(a) is concerned with deliberate wrongdoing in the process by which a VCC comes into existence, namely the verification, the approval, the crediting, and the individuation. The organising idea is the deliberate character of the wrongdoing. The single requirement is that the wrongdoing be deliberate. Whether it operated through a false or misleading representation, through deliberate concealment, or through a deliberate breach of a requirement governing verification, approval, crediting, or individuation, is immaterial to Principle 10(1)(a), and is a matter of characterisation for the law of the enacting State.

10.6 Legal traditions describe and classify deliberate wrongdoing in different ways. Some treat wrongdoing achieved by deception as a category distinct from deliberate wrongdoing that does not involve deception. Some draw the principal line between intentional wrongdoing and serious but unintentional fault. The terminology, and the internal boundaries, differ from one system to another. These Principles do not adopt any single classification. What Principle 10(1)(a) requires, in every system, is that the wrongdoing be deliberate.

10.7 The deliberate wrongdoing must have been material to, and a contributing cause of, the verification, approval, crediting, or individuation by which the VCC came into existence. It is not sufficient that the wrongdoing occurred in the broader background of the project. Deliberate wrongdoing that was not material to the creation of the VCC does not provide a ground for revocation.

10.8 Conduct short of direct intention falls within Principle 10(1)(a) only where the actor proceeded without genuinely believing the statement or premise on which the verification, approval, crediting, or individuation depended, or was actually aware that it might be unsupported and consciously chose to proceed regardless. An honest belief that the statement or premise was true, even if unreasonable or carelessly formed, is not deliberate wrongdoing. It is a failure of care, addressed in Commentary 10.12 to 10.15.

10.9 Where deliberate wrongdoing has been material to the verification, approval, crediting, or individuation of a VCC, it vitiates the constitutive process itself. The consequence under Principle 10(4) is that the VCC is treated as never having been validly created.

10.10 Examples of deliberate wrongdoing in the verification, approval, crediting, or individuation of a VCC include a VVB knowingly issuing a verification statement that does not reflect the verification actually carried out; collusion between a VVB and a project proponent to the same effect; a CB knowingly approving a verification statement in deliberate breach of the rules of the CCP, or in deliberate disregard of a conflict of interest that the CB knew to be material to the integrity of approval; and a registry operator knowingly crediting to an account units that the approved positive verification statement did not authorise, such as a quantity in excess of that approved, or knowingly assigning a unique identifier to a unit that was not approved. Whether a given instance is classified as wrongdoing by deception or as deliberate wrongdoing without deception is a matter for the law of the enacting State, and nothing in Principle 10(1)(a) turns on that classification.

10.11 A distinction needs to be drawn between deliberate wrongdoing and illegality. Illegality is neither necessary nor sufficient to engage Principle 10(1)(a): a constitutive act may be procured by deliberate wrongdoing without contravening any other rule of law, and conduct may be unlawful under other law without involving deliberate wrongdoing in a constitutive act. What engages this Principle is the deliberate character of the wrongdoing in a constitutive act, not illegality as such. For example, where the GHG mitigation project, or its operation, is illegal under the law of the place where it is carried out, but that illegality does not involve deliberate wrongdoing within Principle 10(1)(a), the illegality does not, of itself, render the VCC void or provide a ground for cancellation for revocation. The validity of a VCC depends on the constitutive acts in Principle 2(1) and on the law applicable to the VCC, not on the lawfulness of the underlying project under other law. Illegality may carry consequences under other law (see Commentary 10.3 and Principle 13), but it does not, through Principle 10(1)(a), create a route to revocation.

Conduct Short of Deliberate Wrongdoing: Negligence and Honest Mistake

10.12 Principle 10(1)(a) is confined to deliberate wrongdoing. It does not extend to conduct that falls short of that threshold, whether a failure of care, however serious, or an honest mistake made with no failure of care at all. The operative line under this ground is between deliberate wrongdoing and everything short of it; negligence and innocent error alike fall outside Principle 10(1)(a). This confinement concerns only the deliberate-wrongdoing ground and does not affect the separate ground of complete nullity under Principle 10(1)(b), which turns on the objective absence of a genuine constitutive act and not on the character of anyone's conduct (see Commentary 10.16). Three considerations support it.

10.13 First, the deliberate character of the wrongdoing is the organising idea of Principle 10(1)(a), and conduct that is not deliberate lacks that character. A failure to take reasonable care, however serious, remains a failure of care, and an honest mistake remains a mistake; neither is deliberate wrongdoing, whatever label a legal system may give it. The fact that other law may attach especially serious consequences to a grave failure of care does not make it a ground for revocation under this Principle.

10.14 Second, the architecture of these Principles depends on a division of labour between this Principle and Principle 11. Most cases in which a mitigation outcome is later shown to have been overstated involve no deliberate wrongdoing, but at most some degree of carelessness or an honest mistake. If non-deliberate conduct, however careless, were a ground for revocation under this Principle, the line between ordinary and serious carelessness would become the principal point of contention, and the allocation of these cases to Principle 11 would be undermined. Principle 11 addresses the non-deliberate overstatement of a genuinely verified mitigation outcome, whether that overstatement arose from carelessness or from honest error; the distinct case in which the constitutive acts were objectively absent or not genuinely present remains one of complete nullity, as explained above and in Commentary 10.16.

10.15 Third, to treat non-deliberate conduct as a ground for revocation would require these Principles to convert a standard of care in the verification or approval process into a rule for the retrospective destruction of the asset in the hands of a current holder, and, where the error was honest and involved no failure of care at all, to destroy the asset on the basis of a mistake for which no one was at fault. Whether a CB or a VVB owes such a standard of care to a holder, to which holders it is owed, and what follows from its breach, are matters on which legal systems differ and which current market practice does not resolve. These Principles do not assume such a standard for the purpose of cancellation for revocation. They leave non-deliberate conduct to personal liability, to regulatory consequences, or to other remedies under other law.

Complete Nullity

10.16 Principle 10(1)(b) is concerned with the case where the creation of the VCC was a complete nullity. The ground addresses the absence of one or more of the constitutive acts required for a VCC to come into existence under Principle 2(1). A constitutive act is absent not only where it never occurred, but also where what purported to be that act did not genuinely satisfy the requirement of Principle 2(1): for example, where there was no underlying GHG mitigation project; where a purported positive verification statement related to a project that did not exist; where no positive verification statement was ever made; where a purported approval was given by a body that was not the relevant CB, so that there was no approval by a CB within Principle 2(1)(b); or where a purported registry entry was made by a person without authority to make it, so that the unit was not validly credited within Principle 2(1)(c). In each case a constitutive act required by Principle 2(1) was not genuinely present, so that no VCC came into existence.

10.17 Principle 10(1)(b) operates on the objective state of affairs at the time of the purported creation. It requires no enquiry into the intention, knowledge, or culpability of any participant. Because a constitutive act required by Principle 2(1) was not genuinely present, the question whether anyone acted deliberately, carelessly, or innocently does not arise. The absence of a genuine constitutive act is itself the ground. Complete nullity is therefore not the innocent counterpart of deliberate wrongdoing. The two grounds operate on different planes: Principle 10(1)(a) is concerned with the character of conduct in the creation process; Principle 10(1)(b) is concerned with the objective absence of a genuine constitutive act. The same facts may satisfy both grounds, but the operation of Principle 10(1)(b) does not depend on the presence of any wrongdoing. Because no VCC came into existence, the position is not cured or confirmed by subsequent events.

10.18 In practice, complete nullity will be rare. The verification process that precedes the creation of a VCC, which includes a site visit and is conducted to recognised international standards (see Introduction paragraph 29), means that a positive verification statement would not, in the ordinary course, be issued in respect of a project that did not exist or a mitigation outcome that had not occurred at all. For that reason, the clearest instances of complete nullity, such as the purported creation of a VCC for a non-existent project, will in practice usually also involve deliberate wrongdoing, and will accordingly satisfy both Principle 10(1)(a) and Principle 10(1)(b). The two grounds will often coincide on the same facts, but they remain distinct, and Principle 10(1)(b)

continues to operate on the objective absence of a genuine constitutive act, independently of any wrongdoing (see Commentary 10.16). Complete nullity therefore remains available, though rare, including in the exceptional case in which a constitutive act is genuinely absent without any wrongdoing, as where, through an innocent error, a unit is credited although no positive verification statement was ever made.

10.19 Principle 10(1)(b) addresses the existence of the VCC as an asset. It does not address the validity of any contract or other dealing in the VCC. A defect in a contract for the transfer of a VCC is not a complete nullity of the creation of the VCC. Conversely, the complete nullity of the creation of a VCC is established independently of any contract or other personal obligation. The crediting of a unit to a registry account is one of the constitutive acts of a VCC. It is not a source of title that confers a valid VCC despite the absence of one of the other constitutive acts; the registry entry does not cure such a defect.

10.20 Legal traditions use different concepts to describe the situation in which a purported act produces no legal effect at all. These Principles do not adopt any single concept. A comparable technique is found in the UNIDROIT Convention on Substantive Rules for Intermediated Securities, which recognises the category of a defective entry while leaving its substantive content to be determined by the law applicable outside that Convention. The analogy is to that technique of recognising a category while deferring its content, and not to the consequences that the Convention attaches, which differ from those fixed by this Principle. The operative content of complete nullity is left to the law of the enacting State. Complete nullity is the ground on which Principle 10(1)(b) permits cancellation for revocation; Principle 10(4) states the consequence.

The Boundary with Overissuance

10.21 Complete nullity is to be distinguished from overissuance under Principle 11. Overissuance concerns a unit in respect of which the constitutive acts under Principle 2(1) genuinely took place: a genuine verification process produced a positive verification statement, the relevant CB approved it, and the unit was credited to a registry account and individuated. What is demonstrated later is that the mitigation outcome those acts verified was overstated. What was wrong was the assessment of the quantity of the mitigation outcome, not the genuineness of the verification.

10.22 The boundary turns on the genuineness of the verified achievement, not on a numeric threshold. Principle 2(1) provides that a VCC represents the fact that a mitigation outcome has been achieved, as verified by a positive verification statement. Where no genuine verified achievement underlies the unit, because there was no genuine verification process, no real GHG mitigation project, or the positive verification statement was fabricated, the constitutive requirement in Principle 2(1)(a) was not genuinely satisfied and the case is one of complete nullity. Where, by contrast, a genuine verification process produced a positive verification statement that the relevant CB approved in relation to a real GHG mitigation project, the constitutive acts genuinely took place, and a subsequent demonstration that the verified quantity overstated the mitigation outcome actually achieved does not make the creation a nullity but is a case of overissuance under Principle 11. The distinction is between the absence of a genuine verified achievement and the overstatement of one that genuinely occurred.

10.23 The example of a VCC created where there was no underlying GHG mitigation project is to be understood in this light. It is a case of complete nullity, as distinct from the case of a real project, genuinely verified, that later proves to have achieved only part of the mitigation outcome represented at creation, which is a case of overissuance.

Personal Rights Surviving Revocation

10.24 Principle 10(5) preserves personal rights that the holder of a VCC may have against another person, notwithstanding that the VCC is cancelled for revocation and treated as never having existed. Principle 10(5) neither creates these rights nor determines their content. Such rights may be extensive, and are not confined to rights against the immediate counterparty. Where a VCC, or the transaction by which it was acquired, carries rights against a transferor, a VVB, a CB, a project proponent, or any other person, those rights are unaffected by cancellation for revocation and may be pursued under other law. The market is thereby able to distinguish, in the pricing of VCCs, between VCCs that carry such rights and VCCs that do not. Principle 10(5) is distinct from Principle 9(6), which concerns rights following an erroneous cancellation; Principle 10(5) concerns rights that survive a cancellation for revocation that is not in error (see Commentary 2.4).

Retrospective effect and innocent acquisition

10.25 Principle 10(4) provides that a VCC cancelled for revocation is treated as having been void from the outset and as never having been the subject of proprietary rights. The consequence is more far-reaching than the setting aside of a transaction. Cancellation for revocation does not merely unwind a dealing in the VCC; it establishes that there was no VCC capable of being the subject of proprietary rights. For that reason, the innocent acquisition rule in Principle 7 does not preserve the position of a person who acquired a purported VCC that is cancelled for revocation. Principle 7 protects an innocent acquirer against competing proprietary claims to an existing VCC. It does not bring into existence a VCC that never existed. A person who acquired a purported VCC that is later cancelled for revocation must look to the personal rights preserved by Principle 10(5), and not to Principle 7, for any remedy.

10.26 Some registry-based and intermediated-holding regimes protect a person who relies in good faith on a defective entry. These Principles treat the analogous situation differently: where the constitutive acts genuinely took place and the defect lies only in the accuracy of the mitigation outcome, the matter is governed by Principle 11, not by revocation. Where a constitutive act was absent or not genuinely present, or was procured by deliberate wrongdoing, the VCC is treated as never having existed, and the question of such protection does not arise. The position of an acquirer in the revocation cases is accordingly a matter of the deliberate design of these Principles, which place the narrow revocation grounds outside the reach of good-faith acquisition while channelling honest-error cases to Principle 11.

Characterisation, demonstration, and the role of CB rules

10.27 Principle 10(2) leaves to the law of the enacting State to specify the characterisation of conduct as falling within or outside the ground in Principle 10(1)(a), and the circumstances amounting to complete nullity for the purposes of Principle 10(1)(b). The same technique is used in Principle 7, where the standard of good faith for innocent acquisition is the standard of the relevant State (see Commentary 7.8). Principle 10(2) is confined to characterisation. It does not leave the consequences of revocation to the enacting State; those consequences are fixed by Principle 10(4) to (7). Nor does Principle 10(2) permit the grounds in Principle 10(1) to be widened to reach conduct that these Principles place outside them, such as a failure of care or an honest mistake. Nor does it displace any overriding mandatory rule that the forum applies of its own motion.

10.28 The standard, and the procedure, by which a ground in paragraph (1) is subsequently demonstrated are matters for the rules of the relevant CB, for the court or the competent authority, or for other applicable law. Paragraph (3) identifies who may cancel a VCC for revocation. Where a CB cancels a VCC under its own rules, those rules supply the procedural route to cancellation. They do not enlarge the grounds in paragraph (1), and they do not alter the consequence in paragraph

(4). A CB cannot, by its rules, make revocable a VCC that does not fall within paragraph (1), nor attach to revocation a consequence other than that fixed by these Principles.

Cancellation Waterfall

10.29 Principle 10(7) provides for a waterfall schema for the cancellation of VCCs with the default rule in Principle 10(7)(d) adopting the general property law rule of pro rata sharing of losses as this is the fairest rule of loss allocation.

10.30 Principle 10(7)(c) and (b) provides for the possibility of a differently structured regime for cancellation at the time of creation, which may either be in accordance with a CB's general rules (Principle 10(7)(c)) or a particular regime peculiar to a particular project (Principle 10(7)(b)). Such a regime may, for example, provide that any VCCs that are retained by a project proponent are cancelled ahead of those of other registered holders in the event of cancellation for revocation. In either case, such regimes different from that of pro rata sharing of losses must have been brought to the attention of all registered holders at the time of creation in order to displace Principle 10(7)(d).

10.31 Furthermore, Principle 10(7)(a) enables a registered holder to subordinate their VCCs to those of another registered holder by way of a valid legal instruction to the registry operator. Whilst this may be the result of an agreement between two registered holders (e.g. registered holder A may agree with registered holder B that A's VCCs will be cancelled ahead of B's in the event of a revocation), Principle 10(7)(a) does not require an agreement. It is accordingly possible for registered holder A to unilaterally sacrifice its VCCs ahead of those of registered holder B without the latter's agreement so long as registered holder A has given a valid legal instruction to the registry operator to that effect. Nor will an agreement per se without any valid legal instruction to the registry operator suffice since it would not be possible for the registry operator to effect cancellations in accordance with the parties' agreement otherwise. Where the registry operator has not been given a valid legal instruction pursuant to such an agreement, the effect (if any) of their agreement is a matter for other law. It is possible, for example, that such an agreement may be given effect by other law as an obligation by registered holder A to transfer the relevant quantity of VCCs to registered holder B as a result of the cancellation for revocation of B's VCCs.

10.32 Where a VCC is the subject of a security right, all parties with proprietary rights in the VCC should agree before the relevant registered holder (or secured creditor with the benefit of a control agreement under Principle 22(2)(b)) invokes Principle 10(7)(a) to subordinate the VCC to another registered holder. However, where a registered holder (or secured creditor with the benefit of a control agreement under Principle 22(2)(b)) invokes Principle 10(7)(a) without the concurrence of other parties with proprietary rights in the VCC whose interests are thereby extinguished with the cancellation of the VCC, the rights of those parties against the registered holder (or secured creditor with the benefit of a control agreement under Principle 22(2)(b)) is a matter for other law.

10.33 Principle 10(7)(d) is accordingly not intended to be prescriptive but rather a default solution of last resort that ensures that the market can price in VCCs with superior post-cancellation solutions. These include a hierarchy of cancellations pursuant to Principle 10(7)(a), (b), or (c), the provision of rights of replacement or compensation as part of a VCC, as well as the possibility of insurance, which lie outside these Principles. By setting out a non-prescriptive rule, the market's ability to innovate is unconstrained, so that a variety of responses to the problem of revocation can be tested with no preconception as to what works best but ensuring that there is a fair default rule in the absence of any specific solution.

Principle 11

Overissuance

- (1) Overissuance occurs where, after the constitutive acts required by Principle 2(1) have genuinely taken place, it is demonstrated that, without deliberate wrongdoing, the mitigation outcome represented by the VCC had not, at the time of the creation of the VCC, been achieved to the extent represented.**
- (2) A VCC is not cancelled where overissuance is demonstrated.**
- (3) Paragraph (2) concerns only the proprietary status of the VCC. It does not prevent or affect any arrangement between CBs, VCC registries, or other market participants as to how overissuance may be addressed, nor any consequence that may attach to overissuance under [regulatory or] other law.**

Commentary

11.1 Principle 11(1) defines overissuance. It is the case in which the constitutive acts required by Principle 2(1) genuinely took place, a genuine verification process produced a positive verification statement, the relevant CB approved it, and the unit was credited and individuated, but it is subsequently demonstrated that, without deliberate wrongdoing, the mitigation outcome represented by the VCC had not, at creation, been achieved to the extent represented. Overissuance is thus distinct from complete nullity, where a constitutive act was not genuinely present (see Principle 10(1)(b) and Commentary 10.16 to 10.20), and from revocation for deliberate wrongdoing under Principle 10(1)(a). The shortfall may arise from carelessness or from wholly innocent error; what matters for Principle 11 is only that it did not arise from deliberate wrongdoing. The typical case is an honest error: for example, a project credited with the equivalent of 1,000 tonnes of CO₂ is later shown to have achieved only 700, through no deliberate wrongdoing. Although Principle 11 refers to a singular VCC, overissuance is unlikely to involve singular VCCs. It is important to bear in mind that words in the singular include the plural (see Principle 2(24)).

11.2 Principle 11(2) states the base rule: overissuance does not cancel the VCC. The unit is not cancelled and continues to be treated as the subject of proprietary rights, notwithstanding that the mitigation outcome it represents has been shown not to have been achieved at creation to the extent represented. This is a deliberate departure from the consequence that would otherwise follow from the conception of a VCC adopted in these Principles, under which a VCC represents the fact of a genuinely verified mitigation outcome and, absent that outcome, would not be the subject of proprietary rights. The reasons for the departure, and its character as an anomaly, are explained in Commentary 11.3 to 11.8.

11.3 Principle 11(2) is a doctrinal anomaly. Private law generally treats a defect in the substantive conditions for the existence of an asset at the moment of creation as a ground for treating the asset as void from the outset. Intellectual property regimes uniformly treat patents, registered designs, trademarks, and copyright the same way: where the substantive requirements for creation are subsequently shown not to have been met at the relevant time, the right is treated as void from the outset, even in the absence of any deliberate wrongdoing. Regulatory-grant regimes, including telecom and spectrum licences, aviation slots, pharmaceutical marketing authorisations, fisheries quotas, mining claims, and water rights, generally treat an allocation defect in the same way, even where it is innocent. The base rule in paragraph (2) departs from this pattern.

11.4 The justification for paragraph (2) is policy, not doctrine. Markets in IP rights and other intangibles function under the standard private-law rule that a defect in the substantive conditions

at creation renders the right void from the outset. They do so without market dysfunction. The case for departing from that rule in the VCC context rests on three features distinctive to voluntary carbon markets.

11.5 First, voluntary carbon markets and their institutional infrastructure are nascent. The CBs, VVBs, methodologies, and registries that police VCC creation vary widely in maturity. Their rules and standards are still consolidating. Were the standard retroactive-invalidity rule to apply, the variability in CB integrity would translate directly into instability in the asset itself, and that instability would be a hinderance to the entire market rather than a price paid by the holders of any one defective VCC.

11.6 Second, the underlying activity is inherently uncertain. Greenhouse-gas mitigation outcomes depend on environmental, biological, and atmospheric processes that scientific understanding continues to refine. Methodologies must therefore evolve. If every methodological refinement could retroactively destroy VCCs created under earlier methodologies, the market would never reach the scale that climate policy requires, because no rational participant would acquire an asset whose validity is contingent on the state of science holding still.

11.7 Third, the policy imperative of scaling is acute. The voluntary carbon market is a critical instrument for mobilising private capital towards greenhouse-gas mitigation and for supporting State efforts under the Paris Agreement. Mobilisation on the necessary scale depends on the legal certainty that institutional investors, financiers, and secured creditors require, and on that certainty being available now rather than after a generation of market maturation. The cost of waiting is borne by the climate.

11.8 Principle 11(2) is offered, candidly, as a policy choice. What it achieves is the stability of a VCC as an asset capable of attracting institutional capital. This is purchased at the cost of losing the assurance that a VCC in fact represents the achievement of the environmental benefit it purports to represent. That assurance is, by paragraph (2), removed from property law. It is left to other mechanisms, including the rules of CBs and CCPs, disclosure and warranty regimes, insurance, and any regulatory oversight that States choose to develop alongside these Principles (see also Commentary 2.11 to 2.12). The base rule is, in private law and property law terms, an anomaly.

11.9 Principle 11(3) makes explicit that paragraph (2) is only a property rule. The base rule fixes the proprietary status of the VCC, namely that it is not cancelled; it does not determine, prevent, or affect anything else. It leaves untouched any arrangement between CBs, registries, and other market participants as to how overissuance is to be addressed, and any consequence that overissuance may carry under other law, including applicable regulatory frameworks. The clause matters because, once the existence of the VCC as property is severed from the accuracy of the mitigation outcome it represents, the integrity of the market in VCCs must be maintained by other means.

11.10 Those means exist and operate independently of the property rule in Principle 11. The rules of the relevant CB and CCP commonly provide for rebalancing the number of VCCs in circulation against the mitigation outcomes actually achieved, including through buffer pools and through requests for the voluntary cancellation of VCCs (see Introduction paragraphs 48-50). The risk of a shortfall may also be allocated contractually or independently insured. At the level of market governance, bodies such as the ICVCM set integrity thresholds that methodologies and CBs must meet (see Introduction paragraph 39). That Principle 11 leaves overissuance to these mechanisms, rather than treating it as a matter of property law, does not mean that overissuance is unaddressed: it means that the assurance of environmental integrity is maintained by the market and, where applicable, by regulation, rather than by the law of property. Two cautions follow, however. First, the credibility and integrity of VCCs, which the property law of these Principles no longer underwrites, come to rest entirely on these mechanisms; their effectiveness is therefore a precondition of a sound market and not a peripheral matter. Second, because these mechanisms are neither uniform nor centrally coordinated, the treatment of overissuance will inevitably be fragmented, varying from one

CB, VCC registry, and enacting State to another, so that otherwise comparable VCCs may be subject to materially different responses to the same shortfall.

Possible Approaches for a State that does not wish to adopt the rule in paragraph (2)

11.11 A State may find these Principles attractive as a whole and yet be uncomfortable with the base rule in paragraph (2), because it departs from the general principles of intangible personal property. Under those principles, a defect in the substantive conditions for the existence of an asset at the time of its creation renders the asset void from the outset. A State that prefers to retain that orthodox principle may decline paragraph (2) and provide instead that an overissuance leads to cancellation of the VCC, with the same retrospective effect as revocation under Principle 10. Nevertheless, to preserve market certainty in the cases where it matters most, the reach of that cancellation could then be tempered by one or both of two mitigations: a time-bar and a transfer-ripening rule. The following paragraphs describe this approach as guidance if any State takes it; they are not part of the rule in Principle 11.

11.12 The proposed mitigations operate as predictable carve-outs: an honest-error overissuance identified and acted upon promptly, or before a qualifying secondary-market transfer, results in the VCC being treated as void from the outset, while one identified too late, or after the asset has passed into the secondary market, does not. This approach does not eliminate the anomaly described in Commentary 11.3 to 11.8 but narrows it markedly. Whether to adopt the base rule in paragraph (2) or the mitigated general rule described here, and, if the latter, which mitigation or mitigations to attach, are matters for the enacting State; the Commentary below sets out the alternatives without prescription.

The time bar mitigation

11.13 The first mitigation is a time-bar. Cancellation for overissuance is barred once a defined period, to be fixed by the enacting State, has elapsed from the creation of the VCC. During that period, the CB, the registry, or a court may cancel the VCC where overissuance is demonstrated; once the period has elapsed, a later demonstration of overissuance no longer results in cancellation. Whether or not the period has elapsed, cancellation is not the only response to overissuance: market participants remain free to address the risk by contractual arrangement or insurance, and regulatory mechanisms may also apply (see Commentary 11.9 to 11.10).

11.14 The mechanism is a familiar instance of a private-law time-bar. Comparable mechanisms operate in intellectual property: under United States federal trademark law a registered mark may become eligible for incontestable status after five years of continuous use following registration, on the filing of the requisite declaration; and under the European Union Trade Mark Regulation an action to invalidate a later mark is barred after five successive years of acquiescence in its use, subject to a bad-faith exception.

11.15 The length of the period is for the enacting State; a figure in the region of twelve to twenty-four months has been suggested. The choice is not a matter of administrative convenience but of the relationship between this approach and the general principles of property law, and hence of the credibility of the architecture. Too short a period would render the time-bar all but useless: if cancellation were barred almost immediately after creation, the orthodox principle that a defect renders the asset void from the outset would be honoured in form only. A period of sufficient length gives that principle genuine effect, while ensuring that, once enough time has passed, the later discovery of an innocent overissuance does not disrupt the market.

The transfer-ripening mitigation

11.16 The second mitigation is a transfer-ripening rule. It bars cancellation for overissuance once the VCC has been transferred for value to a qualifying transferee, that is, a transferee who (i) is not

a related party of the person to whom the VCC was first credited at creation; (ii) acquires the VCC at a price consistent with arm's-length dealing in the relevant VCC market; and (iii) has no actual knowledge, at the time of transfer, of any pending cancellation proceeding for overissuance. The rationale is structural: the person to whom the VCC was first credited is best placed to know of, and bear the risk of, an honest-error overissuance, while a secondary-market acquirer needs certainty about what it has acquired.

11.17 The three criteria are calibrated to that rationale. The first excludes transfers to related parties of the original allocatee, which would otherwise allow the allocatee to launder the asset through a controlled entity. The second excludes transfers at an undervalue or as a disguised gift, which do not reflect a genuine secondary-market acquisition. The third catches the rare case in which the transferee has actual knowledge that a cancellation proceeding for overissuance is pending; no constructive-notice or general good-faith inquiry is required, because an honest-error overissuance is by hypothesis unknown to the parties at the moment of transfer.

11.18 The transfer-ripening rule is structurally distinct from the innocent-acquisition rule in Principle 7. Principle 7 addresses defects of title between competing claimants as an exception to *nemo dat*. The transfer-ripening rule addresses the continued existence of the asset against the issuer and against the world, not competing claims to title. The two rules operate at different doctrinal layers and do not overlap.

11.19 The closest analogue for the rule is the immediate indefeasibility conferred on a transferee upon registration in registered-title (Torrens) regimes, under which an honest registered transferee is protected even where the instrument under which they were registered was void, subject to the recognised exceptions. The transfer-ripening rule adopts a deliberately narrower knowledge test than the intermediated-securities regimes: the Geneva Securities Convention protects an innocent acquirer unless he “actually knows or ought to know” of the defect (Article 18), whereas this rule requires actual knowledge alone, because an honest-error overissuance is by hypothesis unknown to the parties at the time of transfer (see Commentary 11.17).

Combined operation of the two mitigations

11.20 If both mitigations are adopted, they operate cumulatively. The time-bar extinguishes the right to cancel for overissuance once the period has expired, in respect of any holder; the transfer-bar extinguishes it once a qualifying transfer has taken place, even within the time-bar period. The first bar to take effect terminates the cancellation right. The combined version most closely mirrors the operation of comparable allowance regimes in practice.

Allocation where cancellation affects some VCCs only

11.21 Where a cancellation approach results in cancellation affecting only some of the VCCs of a GHG mitigation project, an allocation rule is needed to determine which are cancelled. A State adopting such an approach may apply the same allocation that Principle 10(7) applies to revocation: a default of pro rata allocation across the registered holders of the project's VCCs that remain subject to cancellation, displaced, in descending order, by (a) a valid legal instruction by a registered holder to subordinate their own VCCs; (b) an order established by the project proponent with the approval of a CB at the time of creation and notified to affected holders; and (c) an order established by a CB in its general rules applicable to GHG mitigation projects generally, notified at the time of creation.

11.22 This mirrors the allocation rule under Principle 10(7) and serves the same function, preserving space for market-developed solutions while providing a fair default of last resort. The pro rata default is scoped to VCCs that remain subject to cancellation, which accommodates the mitigations: the transfer-ripening rule in particular limits cancellation to VCCs still held by the original allocatee or by its related parties.

Principle 12

Voluntary cancellation

- (1) The registered holder of a VCC, or a user authorised by the registered holder in relation to a VCC, can instruct the VCC registry to cancel a VCC, whereupon the VCC registry must cancel the VCC forthwith unless it is exempted from doing so by Principle 15(2)(d)(i) or (ii).**
- (2) A VCC is voluntarily cancelled when the VCC registry makes an entry indicating its cancellation as such.**

Commentary

12.1 Voluntary cancellation is distinct from retirement, which marks the natural end of the life cycle of a VCC. [It could, for example, apply where the VCC is to be transferred to another registry. In such instances, the market practice is to cancel the VCC and re-issue it under the rules of a different crediting body. To call such a process 'retirement' would be misleading since the holder would not then be able to 'claim' the environmental benefit until it retired the replacement VCC.]

12.2 Principle 12(1) provides that it is the registered holder of a VCC (or a user authorised by the registered holder) that can instruct the VCC registry to voluntarily cancel a VCC. This may or may not be the beneficial owner of a VCC as a registered holder may be a custodian of the VCC for another person (see Principle 14). Where the registered holder is not the beneficial owner of a VCC, it will instruct the VCC registry either on the basis of agency or some other similar principle allowing the registered holder to act on behalf of the beneficial owner. In common law systems, for example, custodians will be likely to hold VCCs on trust for the beneficial owner and in these circumstances, it will be trust law principles rather than the law of agency that enables the registered holder to instruct the VCC registry on behalf of the beneficial owner. Principle 12(1) also provides that the VCC registry is obliged to act on such instruction and cancel the VCC in a timely manner. The Principles do not dictate any particular formality for instructions to voluntarily cancel a VCC. It is up to each VCC registry to stipulate what, if any requirements it has for such instructions to be validly made.

12.3 Principle 12(2) specifies that the time at which voluntary cancellation is effective is the moment that the VCC registry updates its record indicating the cancellation rather than some other time, such as the time instructions for cancellation are given, providing certainty as to when cancellation occurs.

SECTION V: ILLEGALITY

Principle 13

Illegality

The effect of illegality on a VCC is a matter of other law.

Commentary

13.1 As mentioned in Commentary 5.6, these Principles only address aspects of private law applicable to a VCC once it is created. Matters relating to events taking place before creation (such as the GHG mitigation project, the verification process, the process leading up to creation) are therefore a matter of other law. Other law, in these Principles, means a State's law to the extent that it is not Principles Law (see Principle 2(21) and (22)). In relation to any specific matter, 'other law' means the non-Principles domestic law applicable to that matter. Whether, therefore, an action taken in the course of such events is illegal would be a matter for the applicable domestic law. In many cases, the domestic law governing whether an action is illegal is the domestic law of the place where the illegal action took place. In this situation, for example, the legality or illegality of a GHG mitigation project would be governed by the law of the project host State.

13.2 If a matter taking place in State X is illegal in that state under the applicable domestic law, the effect in State X of that illegality is also a matter for that domestic law. The consequences of illegality within a State can vary. Usually a criminal sanction can be imposed by the relevant State on the perpetrator of the illegality, and sometimes other forms of liability or other legal effects will flow. Thus, for example, if a GHG mitigation project or the creation of a VCC is illegal under the law of host State X, the consequences in State X of that illegality would normally also be a matter for the law of host State X. The effects of that illegality on VCCs registered in another State (i.e., State Y) might, however, be a matter for the law of State Y. For example, the consequences which the law, a court or authority in State Y would draw from the illegality in State X will depend on many factors, and would usually be governed by the law of State Y. [Given the complexity of the interplay of law and fact that would govern issues of illegality, as well as the limits on the scope of these Principles mentioned in the previous paragraph, subject to Principle 10 (see Commentary 10.11) the Principles leave the effect of illegality to other law].

13.3 Principle 13 does not affect the treatment of 'proprietary matters' that fall within the scope of the other laws designated by Principle 4.

13.4 As mentioned in paragraph [29] of the Introduction, when carrying out the verification process, a VVB would normally consider whether a GHG mitigation project and/or the creation of VCCs in the relevant circumstances was illegal under the law of the project host State, and would include the results of this consideration in the verification statement resulting from that process. It would be best practice for a CB to require consideration of these matters by a VVB as part of the verification process.

SECTION VI: REGISTRY

Principle 14

VCC Registry: Definitions

- (1) 'VCC registry' means an electronic database operated by a registry operator in which accounts are maintained and the following information is recorded:**
 - (a) The unique identifier of a VCC or a block of VCCs;**
 - (b) The identifier of the person to whose account the VCC or the block of VCCs is credited.**
- (2) 'Registry operator' means a legal person who operates a VCC registry.**
- (3) 'Registry account' means an account maintained by a VCC registry to which VCCs may be credited or debited.**
- (4) 'Registry accountholder' means a person who has entered into a registry account agreement with the registry operator in relation to one or more accounts.**
- (5) 'Registry account agreement' means the agreement governing the registry account between a registry account holder and the registry operator.**
- (6) 'Registered holder' means a registry accountholder to whose registry account a VCC is credited.**
- (7) 'Registry rules' mean the rules of a VCC registry.**

Commentary

14.1 Principle 14 comprises definitions relating to the VCC registry. For a brief explanation of the role of the VCC registry, and how that role is different from that of the VCC project registry, see Introduction paragraph 20. The same entity could provide both the function of a VCC project registry and a VCC registry as defined in Principle 14 (see Introduction paragraph 27). Section VI of these Principles only applies to a VCC registry and not to a VCC project registry. The definitions in Principle 14 are quite broad and minimalistic, so that most (if not all) registries that purport to be a VCC registry are covered by the Principles. This is important since under Principle 2(1) a unit is only a VCC within the Principles if it is registered in a VCC registry (as defined in Principle 14).

14.2 A VCC registry is defined in Principle 14(1) as an electronic database operated by a registry operator. The Principles are neutral as to the type of database and the technological system on which it exists. They apply equally to centralised and decentralised systems, as long as the system can be said to be operated by a registry operator. An entirely decentralised system with no legal person who has sufficient control to be said to operate the registry is not a VCC registry under the Principles.

14.3 A VCC registry is defined in Principle 14(1) as a database recording some very minimal information, namely, the unique identifier of a VCC or a block of VCCs (see Commentary 2.18-2.19) and the identifier of the person to whose account that VCC (or block of VCCs) is credited. A VCC registry may record more information than this, but given possible variations between registries, the definition is as minimal as possible. The VCC registry maintains accounts in which VCCs are credited and from which VCCs are debited. It is therefore a record of holdings of VCCs and movement of VCCs

from one account to another. In relation to the VCC registry as a registry of VCC accounts, see also Introduction paragraphs 20, 36.

14.4 The definition of a VCC registry in Principle 14(1) does not include any requirement that any information recorded on the VCC registry must be publicly accessible. This is in contrast to the project registry in which details of GHG mitigation projects are recorded (see Introduction paragraph 20) which makes key information about the project publicly accessible. The VCC registry records information about accounts to which VCCs are credited and debited, and it is not appropriate that such information is publicly accessible (see Introduction paragraph 33). A registry accountholder can authorise the registry to release information about that account to any person, such as a prospective purchaser of VCCs.

14.5 A VCC registry is operated by a legal person called the 'registry operator' (see Principle 14(2)). Although the term 'operates' is used in the definition, this word is used in the sense of having ultimate control over the VCC registry and the information recorded therein. The day-to-day practical running of the electronic database could in practice be outsourced to another (legal) person (person X), such as a technology or software provider or operator. However, in that case, the 'registry operator' (who has a particular legal role within the Principles) is the person who gives instruction to person X, and who has the ultimate responsibility and control for the VCC registry. The registry operator could be the same legal person as the CB or could be a different legal person. The Principles take no view on this point, but treat the two different functions separately so that the Principles apply if the functions are carried out by two different legal persons.

[While it could be possible for a VCC registry to take the form of a blockchain on a distributed ledger, in order to fall within the definition in Principle 14 a legal person would have to operate the registry, that is, to exercise [ultimate] control over the registry and the information recorded therein.]
[Pending the Working Group's consideration and development of the Tokenisation annexe]

14.6 Principle 14(3) recognises that a VCC registry will maintain accounts to which VCCs can be credited or debited. Market participants, whose relationship with the VCC registry is governed by a contract called, in the Principles, a 'registry account agreement', can have one or more accounts with a VCC registry. A registry might also maintain accounts it calls 'sub-accounts'. Often these 'sub-accounts' will record custody arrangements as described in paragraph 14.8 and Principles 16 to 19 and their commentary. However, if a sub-account does not describe a custody arrangement, but records an account held by a registry accountholder under a registry account agreement, then that 'sub-account' is a registry account as defined in Principle 14(3).

14.7 A person who has entered into a registry account agreement is called a 'registry accountholder' (see Principle 14(4)). The registry account agreement is likely to include a number of rights and obligations between the parties to it, only some of which relate to a VCC (or more than one VCC) credited to that account. The obligations set out in Principle 15(2) are the core obligations relating to a VCC, and arise out of the registry account agreement. The registry account agreement could, if the parties agreed, include obligations relating to a VCC in addition to those set out in Principle 15(2).

14.8 In relation to a VCC credited to a registry accountholder's account, that registry accountholder is called a 'registered holder' (Principle 14(6)). Not all registered holders of VCCs are beneficial owners of those VCCs. The question of whether a registered holder of a VCC has a proprietary right in that VCC (and the legal nature of that right) is a matter for 'other law' (Principle 3(4)). For example, a registered holder of a VCC might be a custodian maintaining that VCC for a client (see Principle 16(5)). The legal nature of a custodian-client relationship will vary from jurisdiction to jurisdiction (see Commentary 17.1). In some jurisdictions, a custodian will have a proprietary right in the assets it maintains for its clients and other it will not. Another example of where a registered holder might not have a proprietary right in an asset is where the asset was

moved into its account as a result of fraud or lack of authorisation, and the registered holder was not an innocent acquirer (see Principle 7). The only situation where the Principles provide expressly that the registered holder has a proprietary right in the relevant VCC is the situation of the very first registered holder, if that holder is not a custodian (see Principle 5(1)(a)). If, however, the first registered holder is a custodian maintaining that VCC for a client, that client will have a proprietary right in the VCC under Principle 5(1)(b). For further explanation, see Commentary 5.4.

14.9 An example of a situation of custodianship could be where a carbon trader holds VCCs in an omnibus (or pooled) account in its name (see Principle 17(2)), that is, the carbon trader is the registry accountholder, and the clients' entitlements are recorded in 'sub-accounts'. If there is a custody agreement as defined in paragraph 16(6) between the carbon trader and its clients, then the carbon trader will be a custodian for the clients, and Principles 16 to 19 would apply. As explained in commentary 17.4, a custodian will usually keep records of the VCCs it maintains for each client, and a State can provide that a mandatory duty to do so is owed under private law or regulatory law or both. The registry operator might keep these records on behalf of the custodian as recorded 'sub-accounts'. In that situation, these sub-accounts do not fall within the definition of 'registry account' in Principle 14(3) (see commentary 14.6).

14.10 A VCC registry has a set of rules governing its operation, which provides for many matters, such as how instructions are to be given to it, who can give it instructions in what circumstances and so on. The entire set of rules of a VCC registry is called 'registry rules' in these Principles (Principle 14(7)). Principle 15 sets out a minimum set of duties which must be provided for in the registry rules for a registry to be a VCC registry within the Principles.

Principle 15**VCC Registry****(1)**

- (a)** The registry rules must provide, at a minimum, that a VCC Registry is obliged to comply with the [private law] duties set out in this Principle in relation to a VCC credited to a registered holder's account.
- (b)** The registry rules must be incorporated in the account agreement with the registered holder.
- (c)** Except as otherwise provided in this Principle, the duties set out in this Principle cannot be excluded by agreement.

(2) A registry operator is obliged to:

- (a)** comply with the registry rules;
- (b)** allocate a unique identifier to the VCC (or to the block of VCCs containing that VCC) and to maintain one, and only one, registry entry in relation to that VCC at any one time;
- (c)** maintain an adequate record of the following matters:
 - (i)** the creation of the VCC;
 - (ii)** any credits and debits in registry accounts in relation to the VCC;
 - (iii)** any retirement or cancellation of the VCC;
- (d)** comply with any instruction given by a registered holder or a user authorised by the registered holder in accordance with the registry rules in relation to the credited VCC, unless:
 - (i)** the registry operator is prohibited from complying with the instruction by other law, the rules of the relevant CB or by any agreement between the registry operator and a third party to which the registered holder is a party or has consented;
 - (ii)** the registry operator is not obliged, by other law or by the registry account agreement with the registered holder, under certain circumstances, to comply with the instruction;
- (e)** comply with an instruction given by any person in accordance with the registry rules or the rules of the relevant CB to create a VCC by crediting that VCC to an account in accordance with Principle 5;
- (f)** comply with any instruction from or authorised by the relevant CB in accordance with its rules and/or the CCP, or as required by a legally binding order of a court or other competent authority determined by other law to cancel a VCC for revocation in accordance with Principle 10;
- (g)** not comply with any instruction to cancel a VCC for revocation that does not fall within paragraph 2(f);

- (h) **not comply with any instruction given by the registered holder or a user authorised by the registered holder to move, retire or otherwise use a retired or cancelled VCC.**
- (3)**
- (a) **Subject to subparagraphs (b) and (c), a registry operator has no proprietary right in a VCC credited to an account of a registry accountholder in the registry it operates.**
 - (b) **A registry operator may maintain an account in its own name to which VCCs may be credited and debited.**
 - (c) **A registry accountholder may grant a security right in favour of a registry operator over VCCs credited to the account of that registry accountholder.**
- (4)** **Subject to subparagraph (3)(b) and (3)(c), a VCC registered in a VCC registry is not available for the satisfaction of claims of creditors of the registry operator.**
- (5)** **Subject to subparagraph 3(b) and 3(c), if a registry operator of a VCC registry enters into an insolvency-related proceeding, a VCC registered in that registry does not form part of that registry operator's assets available for distribution to its creditors.**
- (6)**
- (a) **If a VCC is moved from an account in the VCC registry in which it is recorded to an account in another VCC registry and continues to be governed by the same registry and CB rules that governed that VCC from the time of its creation, that VCC continues to exist.**
 - (b) **If a VCC is removed by voluntary cancellation from an account in the VCC registry in which it is recorded, is recorded in an account in another VCC registry and does not continue to be governed by the same registry and CB rules that governed that VCC from the time of its creation,**
 - (i) **that VCC ceases to exist at the time at which it is cancelled;**
 - (ii) **a new VCC is created at the time of the credit in the account of the second VCC registry, if it meets the definition of a VCC in Principle 2.**

Commentary

15.1 The duties set out in Principle 15(2) are the minimum private law obligations that a registry operator of a registry must owe for it to be a VCC registry within the Principles. The obligations must be included in the registry rules and incorporated in its account agreements, so that they are owed to registered holders of VCCs credited to its accounts. They are basic duties, and a State should not permit them to be excluded by agreement (see, however, Principle 15(2)(d)(ii) and Commentary 15.6-15.7). The list in Principle 15(2) is a complete list of these minimum obligations even though some of them are also mentioned in other Principles. They are drafted, for clarity, in relation to one, single, VCC; however, the duties apply in relation to each VCC registered in the registry and are owed to the registered holder of each of those VCCs.

15.2 The duties set out in Principle 15(2) are not duties imposed by regulatory law. However, a State may consider whether regulatory law should impose regulatory obligations similar to the obligations set out in Principle 15(2), as well as other regulatory obligations, to mitigate risk including

systemic risk. For example, it is very important from the perspective of the operation of the market that a VCC registry is operated free from conflicts of interest, such as the use of non-public market information for its own benefit. This type of risk is very commonly addressed as a matter of regulatory law.

15.3 These Principles effectively assume there will always be a VCC registry and a registry operator willing and able to record the creation, transfer, retirement, and cancellation of VCCs. If a registry operator decides to stop operating or becomes insolvent, under most circumstances it would be replaced by another registry operator. However, if this did not happen, the relevant VCC registry could cease to exist. Similarly, if the VCC registry records are destroyed by a cyberattack, a fire or other event, for the registry to continue to exist and perform its functions, the records would need to be reconstituted. The temporary absence of a functioning registry would mean that as a practical matter VCC registered holders will be unable to transfer or to retire their VCCs.

15.4 While this is a very serious risk, it can be mitigated by regulation in a number of ways, albeit beyond the scope of these Principles, which deal solely with private law. For example, regulation can require a registry operator to be licensed or authorised, thus bringing it within the regulatory perimeter. It can then impose regulatory obligations on the regulated operator in relation to the VCC registry it operates, such as an obligation to record and to keep safe and backed-up (according to best practices of registry operation) the information that would be necessary to reconstitute the VCC registry. It could also prohibit a registry operator from ceasing their activities until a successor is appointed. In addition, regulation can impose an obligation have a recovery and orderly dissolution plan providing for preservation of all entries on the VCC registry it operates if the registry operator (or its parent) enters into an insolvency-related proceeding or otherwise ceases to exist. Regulation can also prescribe the procedure that must be followed if a registry does cease to exist, which can include, for example, the obligation for all registry records to be transferred to another, functioning, VCC registry (for discussion of possible processes see Commentary 15.21 – 15.23).

15.5 The risk discussed in paragraph 15.3 can also be addressed contractually. For example, the registry account agreement could prohibit the registry operator from ceasing its activities until a successor is appointed, and the obligation to maintain information can also exist as a private law obligation (such a duty is provided for in Principle 15(2)(c) (see Commentary 15.9 below)).

15.6 The following paragraphs relate to the minimum private law duties mentioned in commentary 15.1 that must be provided for in the registry rules, incorporated into the account agreement and owed by the registry operator to the registered holder in relation to the VCC or VCCs credited to its account. These duties are necessary in order for the system for creation, transfer and retirement of VCCs addressed by the Principles to work.

15.7 The duty in Principle 15(2)(a) is to comply with the registry rules. The rules are likely to include many more duties than those set out in Principle 15(2), and these are likely to be of a high degree of specificity. As mentioned above, the duties set out in Principle 15(2) are minimum obligations.

15.8 The duty in Principle 15(2)(b), to allocate a unique identifier to the VCC (or to the block of VCCs containing that VCC, see Commentary 2.19) and to maintain one, and only one, registry entry in relation to that VCC, is critically important to the individuation and identification of the VCC, which in turn is an important attribute enabling the VCC to be the subject of proprietary rights (see Principle 3(1) and Commentary 3.2 and 14.3). A VCC, as defined in Principle 2(1) and created as set out in Principle 5, represents the achievement of a particular mitigation outcome.

15.9 The duty set out in Principle 15(2)(c) is to maintain adequate records of matters which are vitally important to the existence of the VCC. The information recorded will be needed if, for any reason, the registry ceases to exist and needs to be reconstituted. The term 'maintain' includes the

initial recording of the information and also its preservation. The duty in Principle 15(2)(iii) replicates those set out in Principle 8(3)(a) and Principle 9(4)(a). While the duty is in general terms in Principle 15(2)(c), it would be advisable for more specific technical requirements on the preservation of the information, for example, against hacks or corruption, to be included both in the registry rules and in regulatory law.

15.10 The duty set out in Principle 15(2)(d) is to comply with the instructions of a registered holder or a user authorised by them to give instructions given in accordance with the registry rules (which will include detailed rules about how instructions can be given). These instructions are likely to include an instruction to move the VCC from the registered holder's account into another account by debiting the registered holder's account and crediting the other account. This may or may not have the effect of transferring a proprietary right in the VCC to the accountholder of the receiving account: this will depend on other law, see Principle 3(4) and Commentary 14.8. The instructions may also include an instruction to retire the VCC (see Principle 8).

15.11 However, the duty in Principle 15(2)(d) is subject to a number of qualifications. First, it is qualified by any prohibition on whatever the registry operator is instructed to do to be found in other law, including criminal or regulatory law. If, therefore, it was illegal under the applicable law of a State to move assets into the name of a particular person or type of person, and the instruction received by the registry operator from the registry accountholder was to do just that, the registry operator would not be obliged under the duty set out in Principle 15(2)(d) to carry out that instruction. Second, the duty is qualified by any prohibition found in the rules of the relevant CB. Third, it is qualified by any agreement made between the VCC registry and any third party to which the registry accountholder is a party or has consented. For example, if the registry accountholder had created a security right over the VCC in favour of a third party, under the laws of some States that third party could have made the security right effective against third parties by entering into an agreement with the registry operator and the registry accountholder that the registry operator would not move the VCC from the registry accountholder's account without the consent of the secured creditor. An agreement of this kind is a control agreement under Principle 22, which both makes the security right effective against third parties and, through Principle 15(2)(d)(i), relieves the registry operator of its duty to comply with the registered holder's instructions (see Principle 22(3)(b) and Commentary 22.4). In that situation, the registry operator could refuse to carry out an instruction from the registered account holder to move the VCC to another account.

15.12 Moreover, other law, or the agreement with the registry accountholder, may specify particular circumstances in which the registry operator is not obliged to comply with the registry accountholder's instructions. This would further qualify the basic obligation. For example, the registry account agreement may require the registry accountholder to pay all fees due in relation to a VCC before the registry operator is obliged to comply with an instruction to retire the VCC.

15.13 The duty set out in Principle 15(2)(e) is a duty to obey an instruction to create a VCC by crediting an account with that VCC (Principle 5) providing that the instruction is given in accordance with the registry rules or the rules of the relevant CB. These rules will stipulate who can give such an instruction and how it can be given. For example, the registry rules might permit either the CB or the project proponent to give a valid instruction to the registry to create a VCC and might provide for other requirements, for example, that the instruction was given in writing. In any event, the person giving the instruction will not, at the time of the instruction, be the registered holder (see the definition in Principle 14(6)) since at that time the VCC has not yet been created.

15.14 The duty in Principle 15(2)(f) is to comply with an instruction from a CB to cancel a VCC for revocation. This mirrors Principle 10(3) which sets out the circumstances in which a CB can make such an instruction. It must not cancel a VCC for revocation on anyone else's instruction (Principle 15(2)(g)). This is because Principle 10(3) sets out an exclusive list of who can cancel a VCC for revocation.

15.15 The duty set out in Principle 15(2)(h) replicates that set out in Principle 8(3)(b) and Principle 9(4)(b). Since a retired or cancelled VCC ceases to be capable of being the subject of proprietary rights, the registry operator must not comply with any instruction to move it to another registry account, retire it or otherwise use it.

15.16 In addition to the minimum duties set out in Principle 15(2), the registry rules are likely to include many other duties, and it is open to a State to make any of those non-excludable by agreement. One example of such a duty is what might be loosely termed a duty of stewardship, such as a duty to keep adequate records of matters that need to be recorded in the registry. The obligation to keep a record of creation is important for the existence of the VCC, as described in Commentary 14.4. The obligations to keep a record of credits and debits, retirement and cancellation are also very important as these records enable the market to function and Principles law to apply.

15.17 Principle 15(3)(a) makes it clear that, in relation to VCCs registered in the VCC registry, the registered operator has no proprietary rights. One major consequence of this is that the VCCs registered in the VCC registry are not available for the satisfaction of the claims of the registry operator's creditors (see Principle 15(4) and 15(5)). However, this statement is qualified in two respects. It is possible for a registry operator itself to have a registry account to which VCCs are credited (see Principle 15(3)(b)). This would typically be where the registry operator owns assets for a purpose other than operating the VCC registry (although it would also be possible for a registry operator to hold VCCs in a registry account as a custodian). An example of where a registry operator would own assets is where the legal person that carries out the function of registry operator carries out many functions, of which being the registry operator is just one. In the course of carrying out other functions, it may wish to, for example, trade VCCs, and so it will have a registry account just like any other person, and can have proprietary rights in VCCs credited to that account.

15.18 The other respect in which Principle 15(3)(a) is qualified relates to where the registry operator, in carrying out its function as registry operator, takes a security right over a VCC credited to a registry accountholder's account to secure sums owed by that registry accountholder to the registry operator (for example, for fees payable in relation to the registry account) (see Principle 15(3)(c)). In those circumstances, the registry operator can have a proprietary right (that is, a security right) in relation to a VCC registered in the VCC registry.

15.19 Principle 15(4) and 15(5) makes it clear that, in relation to VCCs registered in the registry, those VCCs do not form part of assets available to its creditors. Principle 15(4) applies where the registry operator has not entered into an insolvency-related proceeding (defined in Principle 2(23)). Here, a creditor might seek to enforce a claim through enforcement procedures available under the applicable other law, but Principle 15(4) makes it clear that it cannot do so. This result parallels the substance of Principle 15(5), which provides that VCCs registered in the registry are not part of the assets available for distribution to the registry operator's creditors if it enters into an insolvency-related proceeding. These provisions reflect the baseline concept that such VCCs belong to the registry accountholders and not the registry operator, who merely effects the registration of information about the VCCs.

15.20 There are two exceptions to Principle 15(4) and 15(5). These relate to the situations set out in Principle 15(3)(b) (discussed in Commentary 15.17) and Principle 15(3)(c) (discussed in Commentary 15.18). The first situation is where the registry operator has its own registry account to which VCCs are credited. If the registry operator has proprietary rights in those credited VCCs, they will be available for the satisfaction of the claims of its creditors outside or within the registry operator's insolvency. The second situation is where the registry operator has a security right in a VCC registered in the VCC registry. The benefit of the security right over the VCC (including the right to enforce it) could be realised by the insolvency officer of a registry operator if the registry operator were in insolvency-related proceedings in the same way as the benefit of any other security right.

15.21 It is possible that a registered holder might wish to hold its VCCs with another VCC registry. Reasons for this could be where the VCC registry in which the registered holder has its account is nearing insolvency, where a VCC registry announces that it will cease operating in the near future, or where a registered holder wishes to take advantage of different registry rules or CB rules. Principle 15(6) addresses two situations. The first (Principle 15(6)(a)) is where VCCs are moved to another registry governed by the [same registry rules] and the same CB rules (that is, the same rules of the same CB) that have governed the VCCs since their creation. This situation could be described as a 'data transfer'. In this situation, the moved VCCs continue to exist. The VCCs, though in an account in a different registry, are still governed by the same governance structure that has governed them since creation, and there will be no need for a new verification statement. It is very important in this situation that there is no double counting of VCCs. Thus, ideally, each VCC would keep its original serial number. [However, even if a VCC had a new serial number, it would still continue to exist since it would still be identified by a unique identifier. However, to ameliorate the danger of double counting, there would need to be a robust way of tracing the VCC from the first unique identifier to the second].

15.22 The second situation is where a VCC is (or some VCCs are) voluntarily cancelled in one VCC registry, recorded in another VCC registry, and governed by new registry rules and new CB rules (and by a new CB). Here a new VCC is created, if it meets the definition of a VCC in Principle 2(1), even though it represents the achievement of the same mitigation outcome as the original VCC. The new VCC will be governed by a new governance structure, involving a new CB and a new set of rules. Therefore, the relevant mitigation outcome will need to be verified by a different VVB producing a new positive verification statement, and that positive verification statement will have to be accepted by the new CB. The VCC will also need a new unique identifier, as well as being registered in the second registry. The crediting of the new VCC to the account in the second registry will be the moment at which the new VCC is created (see Principle 5). Again, extreme care should be taken during this process to avoid double counting.

15.23 The importance of avoiding double counting of mitigation outcomes in both these situations is such that States should seriously consider enacting regulatory law governing the processes described in commentary 15.21 and 15.22 (see further Commentary 15.4).

15.24 It should be noted that any question of liability of a registry operator for complying in good faith with any of the instructions addressed in Principle 15 is a matter for the applicable other law.

SECTION VII: CUSTODY

Principle 16

Custody: definitions

- (1) **'Intermediary' means a person who provides services to another person in respect of a VCC.**
- (2) **'Client' means a person to whom an intermediary provides services.**
- (3) **'Custodian' means an intermediary who provides services to another person pursuant to a custody agreement in respect of that VCC.**
- (4) **'Sub-custodian' means a custodian who provides services to another custodian pursuant to a custody agreement in respect of that VCC.**
- (5) **A custodian 'maintains' a VCC for a client if:**
 - (a) **That custodian is the registered holder of the VCC; or**
 - (b) **That custodian enters into a custody agreement with a sub-custodian with respect to the VCC [in the circumstances set out in Principle 17(3)].**
- (6) **An agreement between an intermediary and a client is a 'custody agreement' if:**
 - (a) **It relates to a VCC; and**
 - (b) **The intermediary is obliged to maintain the VCC for the client.**

Commentary

16.1 The purpose of Section VII (Custody) is to set out private law principles relevant to custody of VCCs. Other law, including regulatory law, may also apply to the provision of custody services. Custody, broadly speaking, is where a person known as a 'custodian' (usually a legal person, which may be a regulated entity), maintains a VCC on behalf of and for the benefit of another person called a 'client' (for a definition of 'maintains' see Principle 16(5) and Commentary 16.5). The client might be another custodian. The VCC is maintained by the custodian in a manner that gives the client special protection against unauthorised dispositions of the VCC and against the insolvency of the custodian who maintains the VCC. The special protection for the client referred to is likely to be achieved in private law by the client having a proprietary right of some sort in the VCC, although the precise technique by which this protection is achieved will vary according to the private law of the relevant jurisdiction (see commentary 17.1). A custodian will either be the registered holder of the VCC, or will be a client of a sub-custodian who will (usually) be the registered holder of the VCC. It is, at least in theory, possible to have more than one sub-custodian in a custody chain, in which case the sub-custodian at the top of the chain will be the registered holder of the VCC.

16.2 Principle 16 contains definitions for the purposes of the Principles of terms that are used throughout the Principles, but especially in Section VII. The cumulative effect of the definitions in Principle 16 is that an intermediary is only a custodian under certain circumstances, and an agreement (between an intermediary and a client) is only a custody agreement in certain circumstances. The definitions thus define the scope of the provisions in the Principles in relation to custody.

16.3 Principle 16(1) defines an intermediary as a person who provides services to another person in respect of a VCC. This definition is for the purposes of the Principles, and relates to the definition of 'custody agreement' in Principle 16(6). Thus, whether the services provided by an intermediary are custody services will depend on whether the agreement between the intermediary and its client is a custody agreement as defined, that is, whether the agreement meets the criteria set out in Principle 16(6) (see also Commentary 16.7).

16.4 Principle 16(2) to (4) defines the important parties in relation to custody. To be a 'custodian' an intermediary must provide services to a client pursuant to a custody agreement (as defined) in respect of that VCC. If the client is a custodian, the intermediary is also a sub-custodian (see Commentary 16.5).

16.5 Sub-custody is where the registered holder of the VCC (the sub-custodian, who is itself a custodian) maintains the VCC for another custodian, who, in turn, maintains it for a client (who is not a custodian). In theory, there could be a chain of two or more sub-custodians, but there will always be a client at the bottom of the chain who is not acting as a custodian. There will also always be a sub-custodian at the top of the chain who is the registered holder of the VCC. Principle 16(4) defines a sub-custodian.

16.6 As set out in Principle 16(5), the concept of 'maintaining' a VCC includes two situations. The first is where a custodian itself is the registered holder of a VCC and 'maintains' it for the client by carrying out a custody agreement with that client in respect of that VCC. The second is where a custodian 'maintains' a VCC by entering into a custody agreement with a sub-custodian (the custodian thereby becoming the sub-custodian's client). Here, the sub-custodian is the registered holder of the VCC and the custodian has rights against the sub-custodian under the custody agreement. Where a sub-custodian is used, the sub-custodian and the custodian both 'maintain' the VCC.

16.7 Principle 16(6) defines a custody agreement relating to a VCC (Principle 16(6)(a)) and, therefore, custody of that VCC. The core duty of a custodian is to maintain the VCC for the client (see Commentary 16.6). If an intermediary does not owe this duty, the agreement is not a custody agreement. There is no specific requirement that the agreement be entered into in the course of the intermediary's business so that an agreement between a person not acting in the course of business (for example, a parent) can be a 'custodian' within the Principles if they control a VCC for another person (for example, a child). Therefore, these Principles would apply to that (non-business) situation. However, Principle 17(2) would not apply, since it is expressly limited to custodians acting in the ordinary course of business.

Principle 17

Duties owed by a custodian to its client

- (1) A custodian, in relation to a VCC that it maintains for that client, owes the following private law duties to its client that, except as otherwise provided in this Principle, cannot be excluded by agreement:**
 - (a) the custodian is obliged to safeguard the VCC;**
 - (b) the custodian is not authorised to instruct the registry operator to move the VCC to the account of another person, or use it for its own benefit, except to the extent permitted by the client and by other law;**
 - (c) the custodian is obliged to comply with an instruction given by the client to instruct the registry operator to move the VCC to the account of another person, unless:**
 - (i) the custodian is prohibited from complying with the instruction by the registry rules, other law or by any agreement between the custodian and a third party to which the client is a party or has consented;**
 - (ii) the custodian is not obliged, by the registry rules, other law or by an agreement with the client, under certain circumstances, to comply with the instruction.**
 - (d) The custodian is obliged to instruct the registry operator or, in the case of sub-custody, the intermediary's own custodian, to retire the VCC if instructed by the client to do so.**
- (2) Unless prohibited by the custody agreement, the registry rules or by other law, a custodian acting in the [ordinary] course of [its] business may maintain VCCs [of the same description] for two or more of its clients as an undivided pool.**
- (3) Where authorised by a client or by other law, a custodian may fulfil its duties to its client under this Principle by entering into a custody agreement with a sub-custodian if, under that agreement, the sub-custodian is bound by the duties set out in Principle 17(1) and any other duties imposed on a custodian of VCCs by the applicable Principles law or other private law.**
- (4) A VCC maintained by a custodian for a client may be subject to a security right:**
 - (a) granted to that custodian by the client;**
 - (b) in favour of that custodian arising by operation of other law; or**
 - (c) granted to a third party by the client.**

Commentary

17.1 Principle 17(1) sets out the minimum private law duties which are owed by a custodian providing custody services under an agreement with a client. If the custodian is a sub-custodian, the client is itself a custodian. The duties relate to the VCC (or VCCs) maintained by the custodian for the client, and, depending on the applicable law, will usually be contractual obligations. They are basic duties, and a State should not permit them to be excluded by agreement. In some States, the general private law on custody of other types of assets will already incorporate these duties, or very similar ones, into custody contracts. Here, a State will only need to ensure that these duties also

apply to the custody of VCCs. In other States, more clarification as to private law duties of custodians of VCCs may be required. The duties themselves are general and, as will be seen from the commentary below, are qualified by the provisions of 'other law' (that is, the applicable law not including Principles law, see Principle 2(21)) as well as by the registry rules (to the extent that these are relevant to the duty). The language of Principle 17(1) is intended to be functional and neutral between legal cultures. In some jurisdictions, the relationship between custodian and client will be legally characterised as a trust, while in other jurisdictions it may be characterised as a contractual or other type of legal relationship. In many States, similar duties are likely to be imposed on custodians as a matter of regulatory law.

17.2 Principle 17(1)(a) makes it clear that the custodian must owe to the client some duties in relation to safeguarding of the VCC. Safeguarding includes the attainment of the result set out in Principle 19(2) (that the assets safeguarded are not to be part of the assets available for distribution to the custodian's creditors if it enters into an insolvency-related proceeding). The details of these safeguarding duties will typically be included in the custody agreement. The duties set out in commentary 17.4 to 17.7 could be included in the custody agreement irrespective of whether a State wished to impose them on all custodians (see commentary 17.3).

17.3 A State might wish to impose certain private law safeguarding duties on all custodians (or on custodians operating in the course of their business). In order to assist States, the following paragraphs set out some private law safeguarding duties that a State could choose to impose, although in practice any such duties might need to be amended or modified in order to comply with the applicable domestic law. If a State did choose to impose a duty, it should stipulate that it cannot be excluded by agreement. Separately, a State may wish to impose these duties on custodians as a matter of regulatory law, that is, by imposing duties for which there is no private law redress but breach of which may incur sanctions imposed by the State. Again, it should be recalled that if the custodian is a sub-custodian, the client is a custodian.

17.4 The first safeguarding duty is the duty to keep a record of VCCs the custodian maintains for each of its clients, that is, a duty to keep proper records. In some States, this duty will already be part of the private law and/or regulatory law duties owed by a custodian to its clients in relation to other types of assets.

17.5 The second safeguarding duty (which builds on the first) is the duty at all times to securely and effectively maintain VCCs in accordance with the records the custodian keeps for its clients. Thus, if the record shows that a custodian maintains one VCC for A, the custodian must either be the registered holder of one VCC which it maintains for A, or must enter into a custody agreement with a sub-custodian in relation to at least one VCC which it maintains for A.

17.6 The third safeguarding duty is a duty to acquire VCCs promptly if this is necessary to satisfy the second safeguarding duty. This is a duty to replace any missing assets, in other words, to reconcile what the custodian actually maintains to its client records. The assets acquired must, of course, be of the same description and in the same quantity as the assets recorded in the records.

17.7 The fourth safeguarding duty is the duty to separate the VCCs maintained for clients from the VCCs maintained for its own account (that is, for itself). This is a common safeguarding duty in many jurisdictions. Moreover, for the result of Principle 19(2) [insolvency] to be attained under some domestic laws, a duty in these terms must be imposed and not be permitted to be excluded by the terms of the custody agreement. A State may also, or alternatively, choose to impose a similar duty as a matter of regulatory law. This duty could be complied with in a number of ways, some examples of which follow. A custodian might separate its clients' VCCs from its own by ensuring that they are not registered as a single block (and recording the VCCs maintained for clients correctly in its own records, see Principle 17(3)(a)). Alternatively, it could maintain house assets (the custodian's own

assets) and client assets in different accounts with a sub-custodian. The legal effect of this separation depends on the applicable other law.

17.8 As a separate matter from the segregation of the custodian's own asset from those of its clients, a custodian might alternatively offer to a client the possibility of the custodian maintaining the VCCs of that client separately from VCCs of the same description of other clients (sometime called full segregation) rather than maintaining client assets of the same description as an undivided pool (see Principle 17(2) and Commentary 17.12). That would require the custodian to ensure that VCCs maintained for that client were either registered separately or in a separate block or to maintain them in a separate account with a sub-custodian so that such assets are exclusively allocated to the client. The legal effect of such arrangement will depend on the applicable other law, and may vary from jurisdiction to jurisdiction.

17.9 The duty in Principle 17(1)(b) refers to the inability of the custodian to instruct the registry operator to move the VCC to the account of another person (including itself) or to use the VCC for its own benefit except as permitted by the client and by other law (as defined in Principle 2(22)). The ability of a custodian to do these things is colloquially known as a 'right of use'. The client may consent to a right of use either by contract or by an instruction to the custodian, and may consent to a use more limited than that permitted by other law. The other law of a State may permit a custodian to have a right of use in respect of VCCs in relation to which it provides custody services: this permission may be contained in regulatory law and/or in private law. In the latter case, the extent of the permission may depend on the way in which a custody relationship is characterised by that private law.

17.10 [There are many reasons why a custodian might want a right of use, including that it wishes to use VCCs it maintains for clients as collateral for its own obligations to third parties, or it wishes to lend or transfer such VCCs to third parties in order to earn revenue (which might or might not be passed back to the client). A right of use is often found in custody arrangements for securities or financial instruments, and Principle 17(1)(b) reflects that such a practice might become prevalent in the VCC market. Many jurisdictions have legitimised a (limited) right of use for custodians by legislation, particularly in relation to non-consumer clients, despite the fact that it might be thought to be inconsistent with strong safeguarding obligations.]

17.11 The duty in Principle 17(1)(c) makes the basic point that a custodian is a person who must deal with the VCC according to the client's instructions. However, this obligation is qualified by any prohibition on such dealing to be found in other law, including criminal or regulatory law, the registry rules (defined in Principle 14(7)) or any agreement made between the custodian and any third party to which the client is a party or has consented. The paradigm example of such a third-party agreement is a control agreement under Principle 22(2)(a), by which the custodian agrees not to follow the client's instructions with respect to the VCC without the consent of the secured creditor (Principle 22(3)(b)). Where such an agreement has been concluded, the custodian may refuse to carry out an instruction from the client to move the VCC to another account, and the client's ability to defeat the secured creditor's interest through a disposition to a third party is correspondingly constrained (see Commentary 22.4). If the client has granted the custodian a security right in the VCC, or any such security right has arisen by operation of law, this will also qualify the custodian's obligation (see Principle 17(5)). Moreover, other law, the registry rules or the agreement with the client, may specify particular circumstances in which the custodian is not obliged to comply with the client's instructions. This would further qualify the basic obligation.

17.12 Principle 17(2) addresses the situation where a custodian maintains VCCs 'of the same description' for several clients. The Principle permits a custodian who is acting in the ordinary course of business to maintain such VCCs as an undivided pool, for example, in a single account or as a block (see below). There is no such permission for a custodian who is not acting in the ordinary course of business. The phrase 'of the same description' is used in these Principles to refer to VCCs

that are treated by market participants as fungible (see also Principle 19(4)-(6)). Fungibility is not a technical characteristic of a VCC, but a matter of market practice. For example, VCCs issued in relation to the same GHG mitigation project could be treated by the market as fungible. The record of any VCC in a registry is individualised because it is uniquely identified. However, as a matter of market practice, many VCCs are treated as fungible so that any such VCC or VCCs will satisfy a delivery obligation in relation to a VCC. Moreover, a number of VCCs may be created as a block (see Commentary 2.15), bearing one serial number, and would therefore be treated as fungible. If a custodian was the registered holder of a block of VCCs which was maintained for more than one client, it would maintain that block as an undivided pool for those clients.

17.13 The ability of a custodian to maintain VCCs for several clients as an undivided pool under the Principles is qualified in Principle 17(2) by being subject to other law (such as the regulatory law or other private law of the relevant State), the registry rules and the relevant custody agreement or agreements. Two possible consequences of the custodian's ability to maintain VCCs as an undivided pool are discussed in the next two paragraphs.

17.14 First, the custodian may maintain an undivided pool of client assets all of which are registered in the custodian's registry account (either as a block, a series of blocks, or singly), so that no specific VCC or quantity of VCCs is specifically allocated to a particular client. The number of VCCs within the undivided pool allocated to each client will be recorded in the records of the custodian. If the custodian maintains VCCs for several clients with a sub-custodian, maintaining them as an undivided pool means that the custodian need not have a separate sub-account with the sub-custodian for each client. As a result, an undivided pool as described above includes all VCCs 'of the same description' registered in the registry account of the custodian as well as all VCCs 'of the same description' maintained with one or more sub-custodians.

17.15 Second, when the custodian receives an instruction from a client in respect of a VCC maintained for its clients as an undivided pool, it may comply with that instruction using any VCC or quantity of such VCCs registered in its registry account or that it maintains with a sub-custodian. This is because these various VCCs 'of the same description' are treated as fungible, as explained above in Commentary 17.12. Where the custodian is not allowed (by the custody agreement, the registry rules or by other law) to maintain an undivided pool, it must implement what is often called full segregation, that is, that a specific VCC must be registered in the name of the custodian, and must be recorded as maintained for the client in the records of the custodian. The reference to 'a custodian' in Principle 17(2) also applies to a sub-custodian, whose clients are custodians.

17.16 Principle 17(3) makes it clear that a sub-custody structure can be used. Under this structure, the custodian maintains the VCC by entering into a custody agreement with a sub-custodian with respect to that VCC (see Principle 16(4) and (5) and Commentary 16.4 and 16.5). The agreement will only be a custody agreement if the conditions in Principle 16(6) are met. A custodian would, however, be in breach of its own duties to the client if the chosen sub-custodian was not subject, in the sub-custody agreement, to the mandatory and non-excludable private law duties of a custodian under the applicable law. These duties include those set out in Principle 17(1) plus any other duties that the relevant State has chosen to make mandatory. Other law determines the extent to which, if at all, a custodian is responsible to its client with regard to the non-performance by the sub-custodian of its duties under the custody agreement.

17.17 Principle 17(4) recognises that a custodian may have a security right in the VCC it maintains for a client. For example, the client may owe the custodian fees, for which the custodian wishes to be secured, or the custodian may have lent the client money to acquire the VCC. Similarly, a third party may have a security right in a VCC maintained by a custodian for a client. [If a custodian is the registered holder of the VCC, the registry operator is not under any duty in relation to the existence or validity of the custodian's security interest, of which the registry operator may be unaware.]

Principle 18

Innocent client

- (1) Subject to paragraph (2), if a transferee is a client of a custodian, a VCC is credited to the custodian's registry account by the VCC registry operator, and the custodian maintains the VCC for the client pursuant to their custody agreement, no rights based on a proprietary claim to that VCC may be successfully asserted against the client.**
- (2) Paragraph (1) does not apply if the client, at the time from which the custodian maintains the VCC for that client, has knowledge that, or ought to know pursuant to the standards applied in the relevant good faith acquisition and take-free rules as specified by the relevant State, that**
 - (a) another person has a proprietary right in the VCC; and**
 - (b) the transfer violates the rights of that other person in relation to its proprietary right.**
- (3) If VCCs are maintained by a custodian for two or more clients in an undivided pool, paragraphs (1) and (2) apply to each client for whom the VCCs are maintained.**

Commentary

18.1 Principle 18 is an adaptation of the innocent acquisition rule (Principle 7), tailored to the context in which a person acquires VCCs through a custodian. It addresses the situation in which a client is the transferee of a VCC, and the VCC is credited to or maintained in an account by the custodian under a custody agreement. In such cases, this Principle provides that the client is protected from proprietary claims brought by third parties whose rights were infringed by the transfer.

18.2 Principle 18 applies at each level of a custody chain. If a sub-custodian maintains a VCC for a custodian, who in turn maintains it for a client, the custodian may benefit from Principle 18 in its role as a client of the sub-custodian. In turn, the client of the custodian is also protected, provided the requirements under paragraphs (1)-(2) are met.

18.3 Where VCCs are maintained in an undivided pool for the benefit of multiple clients, paragraph (3) makes clear that the regime articulated in paragraphs (1) and (2) applies individually to each client. The fact that VCCs are pooled does not diminish the individual protection of each client's position under this Principle.

18.4 It is important to understand the interplay between Principle 18, the general innocent acquisition rule in Principle 7, and the shelter rule in Principle 6(2). In many circumstances, a client may be protected without direct reliance on Principle 18. For example, the custodian itself may qualify as an innocent acquirer under Principle 7. If the custodian acquires the VCC and meets the requirements of Principle 7(4), it takes the VCC free of conflicting proprietary rights. The client would then acquire its interest from the protected custodian and be shielded by virtue of the shelter rule in Principle 6(2). Alternatively, where the custodian acts purely as an agent for the client-transferee, Principle 7 may apply directly to the client as the principal acquirer.

18.5 Principle 18 is necessary for the specific situations in which Principle 7 does not apply. Its primary role is to protect an innocent client even when its custodian, for whatever reason, would not qualify as an innocent acquirer; for instance, if the custodian has knowledge of a conflicting claim which is not shared with or imputed to the client. In such cases, Principle 18 ensures that clients are not disadvantaged by their use of custodial services and can obtain protection that would have been available to them in a direct acquisition.

Client Standard of Conduct under Principle 18(2)

18.6 Paragraph (2) defines the standard of conduct the client must meet to benefit from the protection of Principle 18. This provision adopts a dual approach. First, it denies protection if the client has actual knowledge that another person has an interest in the VCC and that the transfer violates that person's rights. Second, for circumstances short of actual knowledge, it defers to national law, requiring an assessment of what the client 'ought to know' based on the standards applied in the relevant State's good faith acquisition and take-free rules. This may include objective tests (determining what a reasonable person in the client's position should have known) or more specific notice requirements, depending on the applicable law. This approach ensures consistency between Principle 18 and Principle 7(4)(c).

18.7 The test for denying protection is cumulative, requiring that the client has the requisite knowledge or notice of both elements set out in sub-paragraphs (a) and (b). The client must know (or ought to know) not only that another person has an interest in the VCC, but also that the specific transfer violates that person's rights in relation to that interest. For example, a client may be aware that a VCC is subject to a security right, but still qualify for protection if they reasonably believe the secured party has consented to the transfer. In that scenario, the client would have notice of the interest under (a) but not that the transfer violates rights under (b). Protection is lost only when the standard of notice is met for both elements.

18.8 The relevant moment for assessing the client's knowledge is 'the time from which the custodian maintains the VCC for that client'. This may coincide with the initial crediting of the VCC to the custodian's account, but could also occur through subsequent custodial arrangements where the client's relationship to specific VCCs begins later. This timing rule prevents clients from structuring transactions to avoid knowledge they have already acquired while protecting those who genuinely lack notice at the relevant moment.

18.9 **Illustration.** Client A agrees to purchase 500 VCCs from Seller B. Client A arranges for the VCCs to be credited to an account that Custodian Z maintains for Client A, pursuant to their custody agreement. Unknown to Client A, Seller B had fraudulently obtained the VCCs from Party C, who retains a proprietary interest in them. At the time the VCCs were credited to the account maintained by Custodian Z for Client A, Client A neither knew nor ought to have known of Party C's interest or that the transfer from Seller B violated Party C's rights.

18.10 Under this Principle, Client A is protected from any proprietary claim brought by Party C. The fact that the VCCs were credited to an account maintained by Custodian Z for Client A pursuant to their custody agreement is sufficient to trigger the protection, provided the standard of innocence under paragraph (2) is satisfied.

Principle 19

Insolvency of a custodian and creditor claims

- (1) A VCC maintained by a custodian for a client is not available for the satisfaction of claims of creditors of the custodian.**
- (2)**
 - (a) If a custodian enters into an insolvency-related proceeding, a VCC maintained by a custodian for a client does not form part of that custodian's assets available for distribution to its creditors.**
 - (b) If a custodian maintains a VCC for a client with a sub-custodian, and the custodian enters into an insolvency-related proceeding, the rights it has against the sub-custodian in respect of that VCC do not form part of the custodian's assets available for distribution to its creditors.**
- (3) If a custodian enters into an insolvency-related proceeding, the insolvency representative must take reasonable steps**
 - (a) for a VCC registered in the account of the custodian to be moved to a registry account of the client or of a custodian nominated by that client;**
 - (b) for any rights the custodian has against any sub-custodian in respect of a VCC maintained for the custodian's client to be transferred or otherwise made accessible to that client, including through transfer to another custodian nominated by that client.**
- (4) Paragraphs 5 and 6 apply if all of the following requirements are fulfilled:**
 - (a) a custodian enters into an insolvency-related proceeding;**
 - (b) VCCs of the same description are maintained by the custodian for two or more clients as an undivided pool; and**
 - (c) the quantity of VCCs held by the insolvent custodian for those clients is less than the aggregate quantity of VCCs of the same description that it is obliged to maintain for those clients ('shortfall').**
- (5) [The shortfall is met first by any VCCs of the same description maintained by the custodian for itself.]**
- (6) Any [remaining] shortfall shall be borne by the clients for whom the custodian maintains the VCCs as an undivided pool, in proportion to the respective quantity of VCCs of the same description that the custodian is obliged to maintain for those clients.**
- (7) If a custodian maintains a VCC for a client with a sub-custodian and the sub-custodian enters into an insolvency-related proceeding, the custodian must seek to cause that VCC to be registered in its own registry account or to maintain the VCC with another sub-custodian.**

Commentary

19.1 Principle 19(1) applies where the custodian has not entered into an insolvency-related proceeding. It makes it clear that VCCs maintained by a custodian for a client are not available for the satisfaction of the claims of the custodian's creditors. This result parallels the substance of Principle 19(2), which provides that VCCs maintained for clients are not part of the assets available

for distribution to the custodian's creditors if it enters into an insolvency-related proceeding. These provisions reflect the baseline concept that such VCCs belong to the clients, not to the custodian.

19.2 Principle 19(2)(a) sets out the consequences of the insolvency of the custodian in a functional way rather than using legal concepts such as property or ownership. On the custodian's insolvency, VCCs it maintains for clients as custodian are not part of the assets available for distribution to its creditors. In Principle 19(2)(a), the 'custodian' could in fact be a sub-custodian and the 'client' could be a custodian. This situation is addressed by Principle 19(2)(b) which sets out the consequences where a VCC is held through a sub-custodian (see Principle 17(3)). As explained in Commentary 16.5, where a custodian maintains a VCC through a sub-custodian, the custodian (who will be the client of the sub-custodian under a custody agreement) has rights against that sub-custodian under the custody agreement. If the custodian is insolvent, its rights against the sub-custodian are not part of the custodian's assets available for distribution to its creditors.

19.3 Principle 19(3) to 19(7) gives guidance as to suitable rules which should (or, in the case of Principle 19(5), could) apply in relation to VCCs (or if a sub-custodian is used, rights against the sub-custodian) if a custodian enters into an insolvency-related proceeding. These rules are not comprehensive; the applicable insolvency law governs all other issues that could arise in these circumstances. It should be noted that a custodian or sub-custodian could have a security right over, or another type of right to, VCCs maintained for its clients (see Principle 17(5)). The effect of this on the actions taken by an insolvency representative would be a matter of other law.

19.4 Principle 19(3) imposes a duty on the insolvency representative to take reasonable steps so that the client can obtain the VCCs maintained for it by the custodian. If the VCCs are maintained by the custodian by entering into a custody agreement with a sub-custodian (Principle 16(5)(b)), the duty on the insolvency representative relates to the custodian's rights against the sub-custodian. The client may want the VCCs moved into its own registry account (or obtain the rights against the sub-custodian itself), or may want another custodian to maintain them on its behalf. The insolvency representative may need to take certain steps to achieve this result, such as instructing the registry to VCCs from one account to another.

19.5 Principle 19(4) to 19(6) applies where VCCs 'of the same description' are maintained by a custodian for its clients as an undivided pool (see Principle 17(2) and Commentary 17.8). Undivided pools of VCCs 'of the same description' are explained in Commentary 17.12. The phrase 'of the same description' is used in these Principles to refer to VCCs that are treated by market participants as fungible. A custodian can maintain VCCs as an undivided pool either by the VCCs being registered in the custodian's registry account or by entering into a custody agreement with a sub-custodian in respect of an undivided amount of VCCs. In this latter situation, its rights against the sub-custodian will be undivided. Principle 19(4) to 19(6) deals with the situation where there is a shortfall of VCCs, or rights against the sub-custodian, of a particular description. Principle 19(4) explains the situation of shortfall in an undivided pool, namely, that the custodian does not maintain sufficient VCCs to meet the number of VCCs it is obliged, under the relevant custody agreements, to maintain for the clients for whom it maintains the VCCs in the undivided pool. For example, suppose a custodian had a custody agreement with four clients, each relating to 100 VCCs. If the custodian only had 300 VCCs registered in its registry account, there would be a shortfall. In the insolvency-related proceeding of a custodian, there may be potentially as many shortfalls as there are undivided pools.

19.6 If there is a shortfall, a State may wish to provide that the loss is first met by any VCCs of the same description maintained by the custodian on its own account (that is, for itself), whether these VCCs are registered in the custodian's 'house' registry account or whether the custodian uses a sub-custodian (Principle 19(5)). Thus, to the extent of any shortfall, the clients obtain priority over the custodian and its creditors, but only in relation to VCCs of the same description that the custodian holds. This approach follows that of Article 25 of the Geneva Securities Convention. However, under that Convention, a State can make a declaration that this rule is not to apply in that State. In a

similar way, it is a policy decision for a State as to whether to adopt the rule set out in Principle 19(5). For this reason, Principle 19(5) is in square brackets.

19.7 Under Principle 19(6) the loss of VCCs (or rights against a sub-custodian) caused by the shortfall should be borne *pari passu* by all the clients for whom the custodian is obliged to maintain the VCCs of which there is a shortfall. The approach follows that of Article 26(2) of the Geneva Securities Convention. If a State chooses to adopt the rule in Principle 19(5), then the word 'remaining', which is in square brackets in Principle 19(6), applies. Otherwise, that word is not required.

19.8 Principle 19(7) sets out the consequences of the insolvency of a sub-custodian where a VCC is maintained through that sub-custodian (see Principle 19(2)(b)). In these circumstances, the custodian must seek to move the VCC from the registry account of the insolvent sub-custodian either to its own registry account or to the account of another sub-custodian.

SECTION VIII: SECURED TRANSACTIONS

Principle 20

Secured transactions: general

- (1) A VCC can be the subject of security rights.**
- (2) Subject to Principles 21, 22 and 23, other law governs the creation, making effective against third parties, and priority of a security right in a VCC.**

Commentary

20.1 This Section addresses 'secured transactions' in which a security right is established in a VCC. Consistently with the UNCITRAL Model Law on Secured Transactions, the term 'secured transaction' refers to any transaction that creates a proprietary right in a movable asset by agreement, securing payment or performance of an obligation, regardless of the terminology used by the parties to describe such right.

20.2 The Principles assume that each State has its own domestic legal framework governing secured transactions and security rights. The precise scope of secured transactions and the definition of security rights will depend on the relevant domestic law. Such law might encompass various forms of security, including pledges, charges, and security assignments, and may even extend to outright transfers if their structure falls under the rubric of secured transactions law.

20.3 The Principles contained in this Section are not intended to supersede or interfere with domestic conceptions of secured transactions and security rights. Their purpose is limited to suggesting specific adaptations that domestic law should consider to effectively address security rights in VCCs.

20.4 Principle 20(1) extends the key tenet established in Principle 3(1) that VCCs can be the subject of proprietary rights. Since security rights are a subset of proprietary rights, it follows that VCCs can also be used as collateral in secured transactions, just like other types of movable assets.

20.5 It is important to clarify that the subject of a security right under these Principles is the VCC itself, not a right or entitlement with respect to VCCs credited to a registry account. This approach reflects the nature of VCCs as individually identifiable assets recorded in registries that function as direct registration systems. In this respect, VCCs differ from intermediated securities, where the multi-tiered nature of holding structures has led some legal systems to conceptualise the collateral as the account holder's entitlement vis-à-vis their intermediary rather than the underlying securities themselves. No such reconceptualisation is necessary for VCCs. In practice, the creation and perfection of security rights in VCCs will often involve arrangements that affect the registry account in which they are credited, such as control agreements between the grantor, secured creditor, and custodian or registry operator. While these arrangements operate through the account infrastructure, the underlying security right attaches to the VCCs themselves as the collateral assets. The specific methods for making such arrangements effective against third parties and their effect on priority conflicts are addressed in Principles 22 and 23.

20.6 Principle 20(2) confirms the application of the general framework established in Principle 3(4) to secured transactions involving VCCs. Pursuant to Principle 3(4)(c), (g), (h), and (i), other law governs the creation, third-party effectiveness, priority, and enforcement of security rights in VCCs except as displaced by these Principles. The Principles take a minimally invasive approach, introducing asset-specific rules in Principles 21, 22, 23, and 24(2) to address the distinctive features

of VCCs. These asset-specific rules displace other law on the specific matters they address. The aim is to facilitate the integration of VCCs into existing secured transactions regimes without causing unnecessary disruption to well-functioning legal frameworks.

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Principle 21

Registration in a VCC Registry as a method of achieving third-party effectiveness

A security right in a VCC can be made effective against third parties if one of the following requirements is fulfilled:

- (a) The secured creditor becomes the registered holder of the VCC; or**
- (b) A custodian maintains the VCC for the secured creditor as set out in Principle 16(5).**

Commentary

21.1 Principle 21 establishes that, in addition to any other methods of third-party effectiveness that apply to a security right in a VCC under other law, a State should recognise that a security right in a VCC may be made effective against third parties upon the secured creditor becoming the registered holder of the VCC. Consistently with the UNCITRAL Model Law on Secured Transactions, this principle presumes that the crediting of the VCC would occur pursuant to an agreement between the grantor and the secured creditor. This applies both when the VCC is credited directly to the secured creditor's registry account (Principle 21(a)) and when a custodian maintains the VCC for the secured creditor, including through a sub-custodian (Principle 21(b); see Principle 16(5)). This Principle constitutes an asset-specific rule that partially displaces the general deference to other law in Principle 3(4)(g) by establishing a method of third-party effectiveness that States should recognise for VCCs regardless of whether such method exists under their general secured transactions law.

21.2 In many jurisdictions, a general secured transactions registry provides a mechanism by which security rights in a wide range of assets may be made effective against third parties. Principle 21 does not seek to displace such registries. Accordingly, if a general registry filing renders a security right effective against third parties in all movable assets, that option remains available for VCCs. Similarly, a filing specifically identifying VCCs as collateral renders a security interest effective against third parties, that option too remains available. Principle 21 establishes an asset-specific alternative that aligns with the particular nature of VCCs.

21.3 The Principles consistently recognise the critical role of VCC registries in the creation, transfer, and overall commercial life cycle of these assets. Registration in a VCC registry is a constitutive requirement for the coming into existence of VCCs. Similarly, Principles 6 and 7 regarding transfers of VCC incorporate the crediting a VCC to a transferee's account as one of the requirements of the innocent acquisition rule. Principle 21 builds on these elements, integrating the perfection of security rights into the registry-based framework, thereby creating a cohesive legal regime.

21.4 When a secured creditor becomes the registered holder of a VCC pursuant to Principle 21, the innocent acquisition rule in Principle 7 may apply to protect that secured creditor against competing proprietary claims. Principle 7(5) excludes gratuitous transferees from innocent acquisition protection, but expressly preserves such protection for transferees who acquire VCCs in connection with the grant of a security right. This carve-out, explained in Commentary 7.12, reflects the recognition that security transactions, although they may not involve an immediate exchange of value, are embedded in commercial arrangements with underlying obligations. Accordingly, a secured creditor who satisfies the requirements of Principle 7(4) may qualify as an innocent acquirer notwithstanding that no value passed at the time of the transfer. Where a security right is made effective against third parties under Principle 21(b), the corresponding protection derives from

Principle 18. A secured creditor for whom a custodian maintains a VCC is a client within Principle 18(1) and takes free of competing proprietary claims if it meets the standard in Principle 18(2). Principle 18 contains no requirement of value, so the position of a secured creditor on the custody route is no less favourable than under Principle 7 (see Commentary 7.12 and 18.1).

21.5 VCC registries serve as critical sources of information and public notice mechanisms for VCCs. This function makes them particularly well-suited for achieving third-party effectiveness of security rights. In secured transactions law, third-party effectiveness is generally conditional upon the secured creditor providing public notice of the existence of security rights, thereby reducing information asymmetries and transaction costs while enhancing certainty in commercial transactions. VCC registries fulfil this notice function with particular efficiency, as they already serve as a source of information regarding the existence and transfers of VCCs. Where a custodian maintains the VCC for the secured creditor under Principle 21(b), the registry identifies the custodian, or the relevant sub-custodian, as registered holder rather than the secured creditor. In that configuration, third-party effectiveness rests on the grantor's exclusion from dealings with the VCC: the grantor neither appears as registered holder nor retains any ability to instruct the registry operator or a custodian in relation to the VCC. The same is true of a control agreement under Principle 22 (see Commentary 22.2).

21.6 Principle 21 offers several practical advantages for market participants. First, it bolsters the position of VCC registries as comprehensive information hubs for VCCs. Second, it aligns with market practices and expectations in VCC ecosystems, where market participants routinely consult VCC registries as the primary source of information concerning VCCs and their status. Third, it creates consistency between the treatment of outright transfers and security interests, reducing the potential for conflicting claims and legal uncertainty.

Principle 22

Control agreement as a method of achieving third-party effectiveness

- (1) A security right in a VCC can be made effective against third parties upon the conclusion of a control agreement.**
- (2) A control agreement is an agreement between**
 - (a) the grantor, a custodian who maintains the VCC for the grantor, and the secured creditor; or**
 - (b) the grantor, the registry operator who maintains the registry account in which the VCC is credited, and the secured creditor.**
- (3) Under a control agreement, the custodian or registry operator agrees:**
 - (c) to follow instructions from the secured creditor with respect to the VCC without further consent from the grantor; and**
 - (d) not to follow instructions from the grantor with respect to the VCC without the consent of the secured creditor.**

Commentary

22.1 Principle 22 establishes that, in addition to any other methods of third-party effectiveness that apply to a security right in a VCC under other law, a State should recognise a 'control agreement' as a method to make a security right in a VCC effective against third parties. Under a 'control agreement,' a third party—either the custodian maintaining the VCC for the grantor or the registry operator maintaining the account in which the VCC is credited—commits to act on the secured creditor's instructions without further consent from the grantor. This principle builds on established secured transactions frameworks (including the UNCITRAL Model Law on Secured Transactions) that acknowledge control agreements as an alternative to registration or other forms of publicity for achieving third-party effectiveness in certain types of intangible assets. Like Principle 21, this Principle constitutes an asset-specific rule that partially displaces the general deference to other law in Principle 3(4)(g).

22.2 Many legal systems recognise control agreements as a method of making a security right effective against third parties for assets subject to a custodian or intermediary relationship, notably deposit accounts or intermediated securities. This model is grounded in the notion that practical control over disposition or transfer of an intangible asset can substitute for traditional possession. Once the third party, either the custodian or the registry operator, becomes bound to comply with the secured creditor's instructions, the asset is effectively shielded from unauthorised dispositions by the grantor, preventing secret liens or priority contests. Principle 22 extends that rationale to VCCs, treating the commitment of either the custodian or registry operator to follow the secured creditor's directions as an equivalent to possession.

22.3 A control agreement therefore has two components. The first, sometimes described as 'positive control', ensures that the secured creditor can act upon the VCC, notably for the purposes of enforcement (see Principle 24). The second, sometimes described as 'negative control', displaces the duty that the custodian or registry operator would otherwise owe to comply with the grantor's instructions. That duty is set out in Principles 17(1)(c) and 15(2)(d), and falls away because a control agreement is an agreement with a third party to which the client or registered holder is a party (Principles 17(1)(c)(i) and 15(2)(d)(i)). Without the second component, the custodian or registry

operator would remain obliged to carry out an instruction from the grantor to transfer the VCC, and the effects described in Commentary 22.4 would not arise.

22.4 The significance of this control mechanism becomes particularly apparent when considered alongside the innocent acquisition rule in Principle 7, which provides that a transferee who has a VCC credited to their account, for value and without notice of conflicting claims, takes free of competing claims. By binding the custodian or registry operator not to act on the grantor's instructions without the secured creditor's consent (Principle 22(3)(b)), a control agreement effectively blocks a key prerequisite for a subsequent purchaser to become an innocent acquirer, as any potential transferee would be unable to have the VCC credited to their account without the secured creditor's authorisation (see also Commentary 15.11 and 17.11). The effect of this arrangement is to prevent the grantor from creating competing rights that could defeat the secured creditor's interest.

22.5 The recognition of control agreements as a method for achieving third-party effectiveness for VCCs is particularly well-suited to the emerging market practices in this field. The custodial model is becoming increasingly relevant for VCCs, especially for institutional investors and regulated entities. Custodians typically maintain VCCs in omnibus accounts or through other arrangements that facilitate the trading and safekeeping of these assets while minimising transaction costs and operational risks. Market participants are increasingly developing expectations around the ability to dispose of their VCCs without disrupting established custody arrangements or requiring transfers to different accounts. Control agreements satisfy these expectations by permitting the creation of enforceable security rights while preserving the operational efficiencies of the custodial model. This approach aligns with the broader objective of the Principles to accommodate commercial practices in the VCC ecosystem while providing legal certainty and protection for legitimate interests.

22.6 The consent of the secured creditor for the purposes of Principle 22(3)(b) may be given in the control agreement itself, in advance, on a standing basis, and subject to conditions. The parties may accordingly agree that the grantor remains free to deal with the VCCs until the secured creditor notifies the custodian or registry operator that its consent is withdrawn, an arrangement often described in practice as 'springing' control. A security right made effective against third parties under Principle 22 is so effective from the conclusion of the control agreement, whether or not the secured creditor has exercised its rights under it. The practical effect described in Commentary 22.4 operates to the extent that the secured creditor has not consented to the relevant disposition.

Principle 23

Priority of security rights in VCCs

A security right in a VCC that is made effective against third parties in accordance with Principles 21 or 22 has priority over a security right in the VCC that is made effective against third parties by another method.

Commentary

23.1 Principle 23 addresses priority conflicts between secured creditors that have made their security rights effective against third parties through the methods specified in Principles 21 or 22 (crediting to a registry account or control agreement), while another secured creditor has used alternative methods recognised by other applicable law (such as registration). The principle establishes a non-temporal priority rule: the secured creditor using the Principle 21 or Principle 22 methods will have priority even if these steps were taken after another creditor had already made its security right effective against third parties through registration or other means. This Principle constitutes an asset-specific rule that partially displaces the general deference to other law in Principle 3(4)(h) by establishing a priority rule for VCCs that may differ from the temporal priority rules otherwise applicable under domestic secured transactions law. As this super-priority rule is an exception, States should consider whether incorporating it into their domestic appropriately fits with their broader priority schema for security rights.

23.2 Although Principle 23 departs from the general rule in many secured transactions regimes that typically determine priority based on the temporal order of third-party effectiveness, it is nevertheless justified on several grounds. First, it recognises that a secured creditor who has a VCC credited to its account or enters into a control agreement is relying more substantially on the specific VCC as collateral, similar to how possession of negotiable instruments or documents receives priority treatment in many legal systems. Moreover, this approach is consistent with secured transactions rules found in international instruments—including the UNCITRAL Model Law and the relevant provisions of the Geneva Securities Convention—that grant priority to secured creditors who have acquired some form of control over the collateral.

23.3 Second, a secured creditor that perfects through the methods in Principles 21 or 22 should not need to carry out further due diligence to ascertain prior interests. This parallels the treatment of negotiable instruments, where parties taking possession are not expected to conduct additional searches, thereby reducing transaction costs and facilitating commercial circulation. This consideration is especially relevant for VCCs, given the practical challenges prospective secured creditors may face in identifying pre-existing encumbrances.

23.4 Third, the rule in Principle 23 aligns with established financing practices applicable to other assets subject to custodial arrangements, such as intermediated securities, for which control-based perfection is recognised as offering greater certainty in a multi-tiered holding system.

23.5 While Principle 23 establishes the priority of control-based perfection methods over other methods, the structure of the Principles precludes a direct priority conflict between the methods in Principle 21 (credit to account) and Principle 22 (control agreement). Consider first the scenario in which a control agreement is established and a VCC is subsequently credited to a different secured creditor's account. For this to occur, either the first secured creditor must have authorised the transfer, or the custodian or registry operator must have acted in breach of the control agreement (Principle 22(3)(b)). If the transfer was authorised, there is no conflict. If the transfer was wrongful, the question is not one of priority but of innocent acquisition: the second secured creditor will take free of the first creditor's security interest if it qualifies as an innocent acquirer under Principle 7,

and will take subject to that interest if it does not. Consider next the reverse scenario, in which a secured creditor becomes the registered holder pursuant to Principle 21 and a control agreement is subsequently concluded with a different secured creditor. This scenario cannot give rise to a conflict because, once the VCC is credited to the first secured creditor's account, or to the account of a custodian who maintains the VCC for the first secured creditor, the grantor no longer has the VCC credited to its own account or maintained by a custodian on its behalf. A control agreement requires either a custodian who maintains the VCC for the grantor or a registry operator who maintains the grantor's account; neither condition can be satisfied after the VCC has been transferred to the first secured creditor's account. Accordingly, the Principles do not prescribe a priority rule for conflicts between Principles 21 and 22 because the architecture of the Principles prevents such conflicts from arising.

23.6 The most likely priority conflict to arise between control-based methods is where multiple creditors establish control agreements over the same VCCs held by the same custodian. The primary method for establishing priority in this situation is a subordination or intercreditor agreement. In the absence of such an agreement, priority will be determined subject to the laws of the enacting State, typically pursuant to the first-in-time principle.

23.7 These Principles do not preclude VCC registries from offering additional notice or filing services related to security interests, though such offering would operate independently of the perfection methods established in Principles 21 and 22. Some registries may choose to provide a voluntary notice functionality, similar to that found in certain international registries, whereby parties can record indications that a VCC may be subject to a security interest. Such registry notices would serve a 'red flag' function, potentially putting subsequent acquirers on notice of possible competing claims, which could affect their ability to qualify as innocent acquirers under Principle 7 depending on the applicable law's treatment of constructive notice. However, these registry notices would not constitute methods of perfection under these Principles, nor would they alter the priority rules established herein.

Principle 24

Enforcement of security rights in VCCs

- (1) Enforcement of a security right in a VCC is subject to other law.**
- (2) Unless the custodian agrees otherwise, if a security right in a VCC maintained by a custodian is made effective against third parties pursuant to a method other than that in Principle 22, the secured creditor is entitled to enforce its security right only pursuant to an order of a court or other public authority.**
- (3) Unless the registry operator agrees otherwise, if a security right in a VCC held by the grantor as registered holder is made effective against third parties pursuant to a method other than that in Principle 22, the secured creditor is entitled to enforce its security right only pursuant to an order of a court or other public authority.**

Commentary

24.1 Principle 24 concerns legal rules governing enforcement of security rights in VCCs. This Principle explicitly defers to other law and does not prescribe particular enforcement methods for security rights in VCCs. Generally available methods provided under other law would apply, including judicial enforcement. The law of a State should not preclude secured creditors from exercising remedies that may exist under other laws or have been provided for in the security agreement.

24.2 All enforcement actions, including disposal and acceptance of the collateral in full or partial satisfaction of the secured obligation, should be available in relation to security rights in VCCs. In enforcing their rights, secured creditors must proceed in accordance with the applicable enforcement rules contained in general secured transactions law, including requirements to proceed in a commercially reasonable manner, provide notifications, and distribute any proceeds in accordance with the priority rules. General rules governing enforcement of security rights included in international standards on secured transactions appear to be flexible enough to accommodate the expectations of VCC lenders and other relevant parties.

24.3 The method used to make the security right effective against third parties can significantly impact the ability to enforce security rights. If a security right is made effective against third parties through the methods described in Principles 21 and 22, enforcement by the secured creditor is likely to be reasonably straightforward. However, if a security right in a VCC is made effective against third parties through other perfection methods provided by other applicable law, it may be difficult in practice for the secured creditor to enforce against that asset without the cooperation of the grantor, since the grantor retains control of the asset. In such cases, the secured creditor might need to obtain a court order to establish control if the grantor refuses to cooperate. This situation would be analogous to a grantor refusing to surrender possession of a tangible asset. Principles 24(2) and 24(3) address the specific requirements for enforcement where the VCC used as collateral is held through a custodian or by the grantor as registered holder, respectively.

24.4 Principle 24(2) specifically addresses the situation where a secured creditor seeks to enforce a security right in a VCC maintained by a custodian, where that security right was made effective against third parties by a method other than a control agreement under Principle 22. In such cases, the custodian may have no relationship with the secured creditor and would typically be unwilling to follow enforcement instructions from an unknown party. For this reason, Principle 24(2) provides that the secured creditor is entitled to enforce its security right only pursuant to an order of a court or other public authority, unless the custodian agrees otherwise. This Principle constitutes an asset-specific rule that partially displaces the general deference to other law in Principle 3(4)(i) by imposing

a requirement that may not exist under domestic enforcement rules. This protection for custodians is consistent with similar provisions in other secured transactions frameworks, such as Article 82(4) of the UNCITRAL Model Law, which provides that extra-judicial enforcement of a security right over a bank account is only available when the bank has agreed to act on the instructions of the secured creditor.

24.5 Principle 24(3) addresses the parallel situation where the grantor is the registered holder of the VCC. In this direct holding scenario, the registry operator maintains the account in which the VCC used as collateral is credited to the grantor. Under Principle 15(2), the registry operator owes a duty to comply with instructions from the registered holder, not from third parties claiming to hold security interests in VCCs credited to that account. Accordingly, a registry operator would have no obligation to follow enforcement instructions from a secured creditor with whom it has no relationship. Principle 24(3) therefore provides that the secured creditor is entitled to enforce its security right only pursuant to an order of a court or other public authority. This requirement protects registry operators from potential liability for acting on instructions from parties whose claimed security interests the registry operator cannot independently verify, while still permitting enforcement through judicial process. The rule applies symmetrically to that in Principle 24(2), reflecting the same policy objective of protecting intermediaries from parties outside their contractual relationships.

24.6 For the avoidance of doubt, Principles 24(2)-(3) do not apply where a secured creditor has perfected their security right pursuant to Principle 21 by becoming the registered holder of the VCC. In that scenario, the VCC is credited to the secured creditor's registry account. Custodians and registry operators would have no reason to know that the VCC was credited pursuant to a security arrangement rather than an outright acquisition, and no reason to refuse instructions. The protective rationale of Principles 24(2)-(3), which address the situation in which a custodian or registry operator receives enforcement instructions from an unrelated secured creditor with whom they have no relationship, simply does not arise. Enforcement by a secured creditor who has perfected under Principle 21 proceeds in the same manner as any disposition by a registered holder, whether through the secured creditor's direct instructions to the registry operator or through instructions to the secured creditor's own custodian.

SECTION IX: INSOLVENCY

Principle 25

Effect of insolvency on proprietary rights in VCCs

- (1) A proprietary right in a VCC that has become effective against third parties under Principles law or other law is effective against the insolvency representative, creditors, and any other third party in an insolvency-related proceeding.**
- (2) Paragraph (1) does not affect the application of any substantive or procedural rule of law applicable by virtue of an insolvency-related proceeding, such as any rule relating to:**
 - (a) the ranking of categories of claims;**
 - (b) the avoidance of a transaction as a preference or a transfer in fraud of creditors; or**
 - (c) the enforcement of rights to an asset that is under the control or supervision of the insolvency representative.**

Commentary

General

25.1 Principle 25 deals with the effect of insolvency on a proprietary right in a VCC. Principle 3(1) says that 'A VCC can be the subject of proprietary rights', which means that a person who has a proprietary right in a VCC can assert that right against third parties, if it has been made effective against third parties. Principle 25 confirms that a proprietary right in a VCC which is effective against third parties is effective against relevant parties in an insolvency proceeding. As explained below, the subject of the insolvency proceeding ('the debtor') may be the person who has the proprietary right or it may be another person. [In this Principle and Commentary, as in all the other Principles and Commentary, it must be remembered that the singular includes the plural.]

25.2 Apart from situations falling within the innocent acquisition rule in Principle 18 and the rule in Principles 21 and 22 whereby a security right can be made effective against third parties by control, Principle 3(4) establishes that whether a person has a proprietary right in a VCC and whether a proprietary right in VCC has been made effective against third parties is a matter of 'other law' (that is, any part of the law of a State that is not Principles law (Principle 2(22))). Principle 25(1) provides for the pre-insolvency effectiveness to continue in insolvency proceedings: the precise result of that effectiveness will also depend on the circumstances and on the applicable other law. In general, however, as recommended in part two of the UNCITRAL Legislative Guide on Insolvency Law (2004) (see recommendation 35), the debtor's estate will comprise assets of the debtor, which are those in which the debtor has a proprietary right, to the extent of that proprietary right.

Typical situations

25.3 The consequences of the operation of Principle 25 can be illustrated by considering three typical situations. (1) The insolvency of a person who 'owns' a VCC, or who, as a secured creditor, has acquired a security right in a VCC, (2) the insolvency of a person, who, as a debtor, has granted to its creditor a security right in a VCC as collateral, and (3) the insolvency of a custodian, who maintains a VCC for a client. In situation (3) the client will wish to retrieve its VCC. Principle 25 primarily concerns situations (1) and (2), which are considered in Commentary 25.4 to 25.8, which,

by way of example, illustrate the operation of Principle 25 in the context of insolvency proceedings resulting in a distribution to creditors. Situation (3) (insolvency of a custodian) is considered specifically in Principle 19 and the commentary to that Principle. Insolvency of a sub-custodian is covered by Principle 19(7).

Situation (1)

25.4 Situation (1) can arise in a number of variations. In the first variation of situation (1) a registered holder of a VCC owns that VCC. Whether a registered holder of a VCC owns that VCC is a matter for other law (see Commentary 14.7). When a registered holder who does own the VCC becomes insolvent, the VCC forms part of that person's estate, since the person's proprietary right remains effective on insolvency (Principle 25(1)). Under typical insolvency law, the insolvency representative can infringe upon an insolvent person's proprietary rights in that they can exercise an insolvent person's proprietary rights for the benefit of that insolvent person's creditors. Thus, the insolvency representative may assume control over the insolvent person's VCCs, monetise them through a transaction, retire them if that action (maybe in conjunction with other matters) would produce value for the estate and distribute the proceeds of sale or the resulting value amongst the creditors. An example of where retirement could produce value for the estate is if the insolvent party has issued a sustainability-linked bond, the interest rate of which depended on compliance with GHG targets which could be achieved by retiring some or all of the company's VCCs. Notably, 'control' here is used in a broad sense. In situation (1), the insolvency representative is likely to want to retrieve the VCC in order to monetise it through a transaction or retirement. Retrieving the VCC is likely to entail becoming entitled to instruct the VCC registry to act in relation to the VCC (see Principle 15(2)(d)). Thus, the insolvency representative is likely to want to become the registered holder of the VCC or to obtain authorisation from the (insolvent) registered holder to give instructions to the VCC registry (see Principle 15(2)(d)).

25.5 The second variation of situation (1) is where the insolvent person has a proprietary right in the VCC but the VCC is maintained for him by a custodian. The insolvent person's proprietary right is effective despite the insolvency proceeding, and the insolvency representative, as above, will want to retrieve and sell or retire the VCC. This time, it is easier for the insolvency representative, since if the applicable insolvency law allows her to take control of the insolvent person's assets, she will be able to instruct the custodian to move the VCC (by debit and credit) to her registry account or to the account of a third party to whom she has agreed to sell the VCC.

25.6 The third variation of situation (1) concerns the situation where a person becomes insolvent who, as a secured creditor, has acquired a security right in a VCC. To make her security right effective, this person may have become the registered holder of the VCC (Principle 21) or may have entered into a control agreement in respect of the VCC (Principle 22), or may have made her security right effective by other methods available under the applicable law (see Principle 20(2)). When the secured creditor becomes insolvent, the security right in the VCC forms part of that person's estate, since the person's proprietary right remains effective on insolvency. The insolvency representative will be able to enforce the security right (if necessary) under other law (see Principle 24).

25.7 The fourth variation of situation (1) is where the insolvent person acquired, as a secured creditor, a security right in the VCC but the VCC is maintained for her by a custodian. This variation is similar to the second variation. The insolvent creditor's security right remains effective despite the insolvency proceedings and the insolvency representative will be able to enforce the security right (if necessary) under other law (see Principle 24).

Situation (2)

25.8 There are also a number of variations of situation (2). In the first variation, a registered holder owns a VCC (see Commentary 14.8) and that person has granted a security right in the VCC

to his creditor. On that person's insolvency, the creditor may wish to enforce the security right in the VCC during the debtor's insolvency. Under Principle 25(1) the creditor's security right is not affected by the insolvency. This means that (depending on the applicable insolvency law and concrete situation) the security right can be enforced by the creditor or the insolvency representative can realise the value of the VCC and pay the creditor out of this value. In any event, the creditor's security right will have the same effect as a security right in any other asset (which will depend on the applicable insolvency law, see, for example, Commentary 25.12). The same analysis applies if the VCC is maintained by a custodian for the insolvent person, except that unless the custodian has agreed to act on the instructions of the secured creditor, an order from a court or other authority will be required (see Principle 25(2)). If the secured creditor has become the registered holder of the VCC or entered into a control agreement, it is much easier for it to enforce the security right extra-judicially, but whether it can do so will depend on the applicable insolvency law.

Principle 25(2)

25.9 While Principle 25 is meant to leave a person's proprietary rights in a VCC unaffected by insolvency, this protection is not absolute. For example, the application of the other law of a State may result in the preference of another person's rights over the relevant VCC. Principle 25(1) does not affect the operation of such a rule, whether it is substantive or procedural, providing that it applies by virtue of the insolvency proceedings. These rules may be found in any part of the law of a State that is not Principles law (i.e. that is 'other law' as defined in Principle 2(22)), including its tax law, insolvency law, general private law, and its procedural law. Principle 25(2) lists three examples of instances where the relevant rules of the other law of a State may affect the rights of creditors, which are not affected by Principle 25(1).

25.10 The first example, set out in Principle 25(2)(a), concerns the ranking of categories of claims. An applicable State's law governing the priority order in which claims on the insolvent estate or on specific assets forming part of the estate are to be ranked, will typically dictate that certain categories of creditors have preference over other creditors (including secured creditors). For example, the law of a State may prescribe that fiscal authorities have priority over secured and unsecured creditors in relation to certain assets of the insolvent person, or that the costs of the insolvency proceedings have preferential status over other secured and unsecured creditors' claims on the insolvent estate.

25.11 The second example, set out in Principle 25(2)(b), concerns the fraudulent transfer of assets. Under the applicable State's insolvency or private law, a transfer of ownership of VCCs may typically be rescinded by the transferor's insolvency representative, if the transfer was made in a prescribed period prior to the insolvency and if the transferor transferred the VCCs to defraud its (other) creditors. Thus, a State's insolvency or private law may infringe upon the proprietary right in a VCC of a person who has acquired that VCC. Similarly, the applicable insolvency or private law may enable a transfer of VCCs amounting to a 'preference' to be rescinded by the insolvency representative of the transferor, if certain conditions are fulfilled.

25.12 The third example, set out in Principle 25(2)(c), clarifies that, if the insolvency representative has taken 'control' of the VCC as described in Commentary 25.4, Principle 25(1) does not affect the operation of any rule of the applicable law relating to the enforcement of rights to that asset whether by the insolvency representative or anyone else. For example, a rule providing for a stay on enforcement by a secured creditor would not be affected by Principle 25(1). Principle 25(2)(c), read in conjunction with Principle 25(1), therefore also implies that third parties, including the VCC registry, must acknowledge and accommodate the insolvency representative's exercise of the insolvent person's rights in these VCCs.