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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 greenhouse gas (GHG) 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 carbon markets: (i) government issued permits or 'allowances' and (ii) credits issued post independent verification that an emission reduction or removal has occurred as a result of specific project activity—'verified carbon credits' or 'VCCs'.
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. Such eligible compliance units can be government issued permits (allowances) and in some cases eligible VCCs. There are currently [36]¹ compliance schemes in force globally and a further [20] approximately under development or consideration.²
 - (b) Jurisdictional emissions taxation where partial offset of tax obligations is permitted through the use of eligible VCCs, e.g. Singapore.
 - (c) Sectoral compliance markets where covered entities submit eligible VCCs, e.g. the 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 their own emissions outside of a compliance obligation, and (ii) a commitment to

¹ Yellow square brackets are used throughout the draft to identify text that either needs to be updated and confirmed or to denote options that are being presented for the Working Group's discussion and consideration.

² International Carbon Action Partnership.

voluntarily finance the reduction or removal of emissions through the purchase of VCCs.

5. It can be noted, therefore, that carbon markets are not just for VCCs but rather several markets with various types of systems and mechanisms using multiple units and metrics. The market in VCCs is a subset of these markets 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 led largely by NGO crediting bodies, to an intended demand-side market driven by compliance and voluntary obligations and financed, like conventional global markets, by regulated institutions, financiers and investors. To enable this transition, clarity on the legal nature of the VCC is fundamental to building a market-based model with adequate governance and clear allocation of risks.

6. Although the importance of VCCs as a mechanism for raising finance and distributing benefits is rapidly being recognised across all parties to the Paris Agreement, the legal nature and the regulatory oversight of the market of VCCs remains in development in many jurisdictions. Certainty on the classification of a VCC under private law is critical to support market participation by private entities including project developers and 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 some jurisdictions already clarify the legal status of VCCs, this usually applies only to units issued under government schemes within that jurisdiction, and not those from independent crediting bodies. These Principles offer a framework when no applicable one exists.

8. 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 also enhance transparency in the underlying markets and promote the liquidity necessary to raise finance. The derivatives market and the markets in VCC are co-dependent, with the derivatives market depending on the strength and integrity of the underlying VCC markets, and that VCC market relying on the derivatives market to promote transparency and liquidity. This co-dependence between the two markets is a further imperative to clarify the legal nature of the underlying VCC under private law to enable a functioning market to develop.

B. Development of Carbon Markets

9. As noted above, carbon markets and emissions trading schemes have emerged as critical tools in the global effort to mitigate climate change, driven by the objectives set forth in the Kyoto Protocol and the Paris Agreement.

10. The Kyoto Protocol³, adopted in 1997, operationalized the United Nations Framework Convention on Climate Change (UNFCCC) by committing industrialized countries and economies in transition to limit and reduce GHG emissions in accordance with agreed individual targets.

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

- a. Emissions Trading (ET): Allowed Parties to the Kyoto Protocol (i.e., States) to transfer and acquire emissions reduction units resulting from projects aimed at

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.

reducing or removing emissions at source, if such units were supplemental to their domestic actions aimed at meeting their targets under the Kyoto Protocol.

- b. Clean Development Mechanism (CDM): Enabled industrialized countries to invest in emission reduction projects in developing countries, earning certified emission reduction (CER) credits that could be used to meet their own targets.
- c. Joint Implementation (JI): Allowed industrialized countries to earn emission reduction units (ERUs) by investing in projects that reduced emissions in other industrialized countries.

12. 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 ERUs are no longer in circulation, however the CDM has been partially folded into the new Paris Agreement Crediting Mechanism (PACM) under Article 6.4.

13. The Paris Agreement⁴, adopted in 2015, expanded the scope of climate action by requiring all countries, not just industrialized countries and economies in transition, to commit to reducing emissions. 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.

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

- a. Article 6.2 facilitates cooperative approaches where countries can create and trade internationally transferred mitigation outcomes (ITMOs). This mechanism builds on the Kyoto Protocol's emissions trading system but with more flexibility and broader participation.
- b. PACM under Article 6.4 establishes a UN centralized mechanism, similar to the CDM, where carbon credits (6.4ERs) can be generated and sold on the international market. In this context 6.4ERs are also VCCs, being units issued as a result of project-based activities.

15. The transition from the Kyoto Protocol to the Paris Agreement reflects a shift towards more inclusive and flexible market mechanisms, designed to engage a broader range of actors and promote more ambitious climate action worldwide.

16. As part of the response to the commitments under the Kyoto Protocol, some jurisdictions implemented domestic emissions trading schemes, the largest of which is still the EU Emissions Trading Scheme or EU ETS, operationalised in 2005. In the EU ETS primary emitters of GHGs 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 a party with a compliance obligation to reduce its emissions below its cap and sell its excess allowances to a party that had exceeded its compliance obligation, a so called a 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 aviation, with allowances being available under auction. Such an 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 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. There are currently [36] compliance schemes in force globally and a further [20] approximately under development or consideration.⁵

⁴ 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).

⁵ International Carbon Action Partnership.

Each ETS is covered by its own rules defining what sectors are covered and what is eligible for submission under that scheme to meet the compliance obligation.

17. Under the EU ETS, for example, allowances are issued by the governing body (EU Allowances or EUAs) 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 a covered entities' compliance obligation 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 the current phase the EU ETS does not allow any project-based units to be submitted for compliance purposes, but this matter is constantly under review for future compliance periods.

18. Alongside the compliance market a market developed where entities (mostly corporates) desired to voluntarily fund carbon projects. Independent crediting bodies developed to meet this need, creating frameworks for project methodologies and quality standards for the issuance of units relating to a verified reduction, avoidance, or removal of emissions. This market is the so-called voluntary carbon market (VCM).

19. In addition to the regional emissions trading schemes there is also CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), a global market-based measure developed by the International Civil Aviation Organization (ICAO) to help the aviation industry manage its carbon emissions. Under the scheme airlines must submit eligible carbon credits to meet their emissions in respect of certain flights. It is estimated that the 15 largest airlines represent approximately 300 million tonnes of emissions a year.⁶ There are no allowances or permits issued into this market and only VCCs issued under specified crediting programs are eligible for submission.

C. Typical lifecycle of a VCC

20. To provide context to these Principles, the key steps in the lifecycle of a VCC are broadly described below. In summary there are three stages:

- a. Generation and supply
- b. Primary and secondary market trading
- c. Use and retirement

21. All VCCs are issued as a consequence of activities in a project designed to reduce, avoid, or remove GHGs from the atmosphere. The lifecycle of a VCC has commonalities whether it is issued by a governmental crediting body, the crediting body of the United Nations under the PACM or an independent carbon crediting body (all such bodies individually and collectively referred to as carbon bodies or CBs).⁷ In summary, that process entails the setting of the methodology that will be used by a project developer, the validation and registration of the project with a CB into a *project registry*, the implementation of the project in accordance with a programme set by the CB (a carbon crediting programme or CCP⁸), the independent third-party verification that the project has achieved certain environmental and other co-benefits in accordance with the relevant CCP, followed by crediting a VCC to an account at a *VCC registry*.

⁶ [To be added].

⁷ 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.

⁸ A CB may run a number of different programs for example for the generation of VCCs or for the generation of other types of credits including plastic credits and biodiversity credits.

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

23. 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 thereby removing the VCC from circulation in the market. The party retiring the unit may use proof of such retirement to fulfil a compliance obligation or to fulfil a voluntary commitment.

24. Set out below is a more detailed description of the general lifecycle of a VCC to add background and context to these Principles. Individual program rules may diverge from these descriptions and use different terms.

1. Generation and supply

(a) Methodology, validation and registration

25. A methodology for a carbon project refers to a set of detailed criteria, boundaries, and procedures used to measure, quantify, monitor, and verify the emission reductions, avoidance or removals achieved by that carbon project. The CB, which can be a private or public entity, often both develops its own methodologies and determines what third party methodologies it will accept. Methodologies fall into two general brackets with some overlaps: nature-based and technology-based methodologies. Within each of those categories are methodologies that reduce or avoid emissions and methodologies that remove GHG. Examples of such methodologies include: nature-based removals through reforestation, technology-based removals through carbon capture and sequestration, nature-based reduction through reduced methane from ruminants and technology-based reduction through clean energy switching. There are a wide range of methodologies with potential overlaps between the broad categories described above. For example some methodologies may be described as nature and technology based. Each CB publishes the details of the methodologies it can accept. New projects may adopt an existing methodology or develop a new methodology subject to approval of the relevant CB. [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.]

26. 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 party in whose name the project is registered and is usually the party into whose registry account the CB will instruct the VCCs to be recorded. The project developer is the party that brings the project to fruition, including sourcing finance and engaging with all stakeholders.

27. Essential to registration of a project with a CB is the project design document (PDD) usually generated by the project developer. This document serves as a blueprint for the project and describes all aspects of the project, including its boundaries, objectives, the methodology, monitoring plan, and 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 of the project and verification of the environmental benefit. The project developer will also compile associated documentation including technical specifications, environmental impact assessments, financial analyses and expected environmental and social benefits.

28. Once a PDD has been developed, the project developer seeks validation of the project by a third-party independent auditor accredited by the CB to conduct validation and verification of carbon

projects⁹ (a validation/verification body or VVB). A VVB has two main roles, (i) validate that projects as set out in the PDD conform to the rules of the relevant CB and the applicable methodology and assess the likelihood that the expected environmental and social benefits will be achieved, and (ii) verification of the achievement of claimed environmental and other benefits as set out in a monitoring report. If the project passes validation, it may then be onboarded by the CB as a project under its relevant CCP. The CB normally makes a publicly accessible 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 balances of VCCs.

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

29. 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, during which the intended social or environmental benefits are measured. The project developer generates a monitoring report that contains the data and calculations relating to the environmental and social benefits during that monitoring period. The monitoring report forms the factual basis for independent verification by a VVB that the emissions reduction, avoidance, or removals have been achieved.

30. The VVB is responsible for verifying the monitoring report and that the claimed achievement of emissions reductions, avoidance, or removals is accurate, real, and in accordance with the relevant methodology and rules of the CCP. Verification occurs periodically (in respect of a verification period) and might coincide with the monitoring periods or not. 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 monthly, 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 much longer intervals.

31. During the verification process the VVB analyses whether the project has achieved the intended environmental benefits in accordance with the PDD and the rules of the CCP during the verification period. The VVB may verify that such has been achieved and produce a positive verification statement, or it may make further comments and recommendations for the project developer to achieve a positive verification statement. Once the project developer has a positive verification statement it can submit the verification report to the CB as the basis for the CB's approval of the generation of a corresponding number of VCCs claimed in respect of the verified environmental benefits during that verification period.

32. Each VCC represents the achievement of the verified emission reduction, avoidance, or removal of specific GHGs measured on a one tonne of CO₂-equivalent basis. The equivalence¹⁰ is measured using a conversion factor based on the relative global warming potential of the relevant GHG over a period of time. By way of example, the conversion factor for methane is approximately 30, meaning the removal of 1 tonne of methane would be equivalent to 30tCO₂e or 30 VCCs.

33. In summary, the project developer continuously monitors the project and periodically produces a monitoring report containing data analysis of GHG removals or reductions, the VVB assesses and confirms the accuracy of the monitoring report through independent review and potentially primary data gathering. The VVB may make recommendations or verify that the

⁹ Examples of VVBs include Det Norske Veritas, TÜV SÜD, Bureau Veritas Certification Holding and Société Générale de Surveillance.

¹⁰ Sources of conversion factors include the GHG Protocol, the IPCC, UNFCCC Guidelines and the ISO GHG Accounting Standard.

monitoring report is correct and the project is eligible for generation of VCCs. This process is designated as the measurement, reporting, and verification (MRV) process.

(c) Issuance and registry

34. 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 notifies the project proponent that it can request that the relevant VCCs are recorded in the designated VCC registry account (commonly called 'issuance' of VCCs). 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, and is therefore somewhat ambiguous, it is not a defined word and is not used in the Principles themselves (see commentary 2.12).

35. The 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 a key financier. A request for issuance may be made at any time after the CB has notified its approval of the verification report to the project proponent. It is not uncommon for the project proponent to delay such request to generate some or all VCCs for commercial reasons, in which circumstances the information relating to a project will be updated to indicate the volumes that have been issued, cancelled or retired and those that are pending issuance.

36. CBs may issue ex ante certificates to represent the expected future achievement of environmental benefits from a registered project, based on projections in the PDD. These ex ante certificates are issued before the underlying environmental benefit has 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 support project financing or underpin advance market commitments, but they do not constitute VCCs as no verification has as yet taken place.

37. 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 and there is no interoperability between registries. This means that transfers of VCCs can only take place intra account within the same VCC registry. The registry infrastructure is evolving, and it is foreseeable that interoperability between separate registries may be enabled in the future or a meta-registry may be developed.

38. On request for issuance of VCCs by the project proponent, the CB instructs the registry operator to credit the relevant volume of VCCs into the designated account. As noted above this is most often the account of the project proponent or a key financier or a representative of key financiers. VCCs can be credited as a single block representing a volume of VCCs or as individual VCCs. In each case either the block or the individual VCCs are allocated a unique identifier. 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.

39. Critically the details of individual account holdings in the VCC registry are not public information to protect the integrity, fairness, and stability of the VCC market, while details relating to the project are commonly public information, including volumes of predicted and verified emissions reductions, avoidance or removals and total volumes of issued VCCs and retired VCCs in respect of that project.

(d) Safeguards and Social and Biodiversity Co-Benefits

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

41. CBs usually require projects to comply with applicable laws, respect human rights, and avoid significant negative social or environmental impacts. This typically includes requirements relating to stakeholder consultation and obtaining free, prior and informed consent (FPIC), grievance mechanisms, land tenure clarity, protection of biodiversity, and the avoidance of involuntary displacement.

42. 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.

43. Beyond these safeguards, some projects may achieve additional certification under complementary programs 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.

44. The attributes of a VCC may be reflected not only in its underlying methodology and verification documentation, but also through labels attributed to VCCs, enabling market participants to distinguish between credits that meet baseline safeguard requirements and those that deliver additional verified social and biodiversity benefits. Such labelling supports transparency, informed purchasing decisions, and the alignment of finance with broader environmental and social objectives.

(e) Primary and Secondary markets

45. The primary market consists of the original purchase of VCCs from the project proponent, normally through bespoke spot or forward sale and purchase agreements. 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 could be the final recipient of the VCCs that intends to use the VCCs for its own submission under a compliance scheme or to contribute to its voluntary climate action, or it could be a market intermediary intending to sell the VCCs in a secondary market.

46. Buyers and sellers in the secondary market might transact bilaterally or on an exchange (including ICE, the CME and EEX) for spot, forward, or futures delivery (at the time of writing this Introduction the futures market is still under development).

47. To settle buys and sells, VCCs can be transferred between accounts. Usually transfers are initiated on instruction from the transferring party to the registry operator. Such buys and sells may occur multiple times in a secondary market. (As noted above at the time of writing this Introduction transfer of VCCs can only occur between accounts within a registry and not between registries).

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

2. Use and retirement

48. The final stage in the intended lifecycle of a VCC is retirement. Retirement refers to the process of permanently removing the VCC from circulation ensuring it cannot be transferred again. To complete retirement, the holder of the VCC instructs the [CB/registry operator] to retire the VCC. 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. The CB then ensures that the registry operator moves, tags, freezes, removes or otherwise encumbers the relevant VCC as retired, thereby removing the ability of that unit to circulate. In effect all that remains recorded in the registry is the previous information relating to the VCC and a record of the purpose of the retirement. The VCC itself no longer exists as it is not registered in an operational holding account.

49. Some parties 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, a party 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 classified as eligible under the rules of that scheme.

3. Revocation and Reversal

50. 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 registration. The rules of the relevant CCP and the CB normally determine how such events can be dealt with by the CB. These two circumstances are commonly referred to as reversal and revocation respectively.

51. Reversal: By way of example, if the project removes GHGs and sequesters such GHGs in storage but some or all of the GHG escapes, then the environmental benefits of the relevant project are reversed. How the CB can deal with this circumstance would normally be dealt with in the rules of the CCP. Some CBs mitigate this risk by only permitting a percentage of the verified environmental benefits to be represented with registered VCCs. This creates a buffer ensuring the aggregated number of VCCs registered do not exceed the actual environmental benefit less the reversed environmental benefits. The buffer is often pooled across different projects but can be project related depending on the rules of the CB; however, such an arrangement may not be compatible with conceptualising VCCs as the subject of proprietary rights as proposed by these Principles. Buffer pools are one method for mitigating the risks relating to reversals but mitigation can be implemented differently depending on who holds the risk and what the consequent loss relates to. For example, the loss may be a financial loss only for a market intermediary in possession of a related VCC. Independent insurance could indemnify the loss.

52. Revocation: Revocation refers to circumstances where, after VCCs have been registered, information comes to light that demonstrates that the claimed mitigation outcome had not been achieved. This could be for various reasons, which may include genuine mistake, better data through improved technology, negligence, fraud, etc. The result is nearly always an over-issuance of VCCs. It may also be that there has been an under-issuance due to error, improved data, etc, in which case the next verification statement would include a rebalance to include the shortfall which can then be issued to new holders.

53. The allocation of risks associated with reversal and revocation between holders of affected VCCs is normally considered in the contractual arrangements between buyer and seller and also in the rules of any emissions trading scheme that accepts eligible VCCs to fulfil compliance obligations. Market participants are increasingly looking at insurance to help cover these risks with some insurance products providing replacement VCCs and other financial compensation.

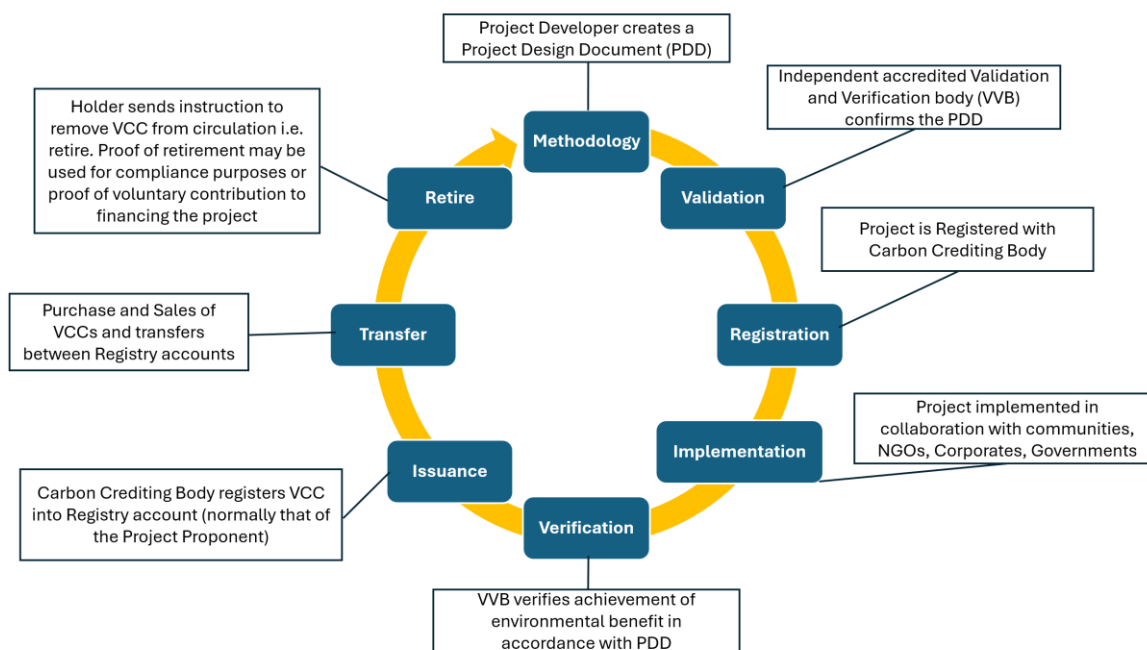


Fig (i) Life Cycle of a Verified Carbon Credit

4. Link to Paris Agreement – NDCs and corresponding adjustments

54. Paragraph 12 of this Introduction refers to the Paris Agreement. Under the Paris Agreement, NDCs and corresponding adjustments work together to ensure that international cooperation on emissions reductions does not undermine environmental integrity or lead to double counting.

55. Each Party to the Paris Agreement must submit an NDC, setting out its nationally determined targets for reducing (or limiting) GHG emissions and, in some cases, enhancing removals. NDCs are economy-wide or sectoral, expressed in different forms (absolute caps, intensity targets, baselines), but all are anchored to a national emissions balance reported through agreed transparency rules.

56. Article 6 of the Paris Agreement allows countries to cooperate internationally, including through the transfer of mitigation outcomes (often called ITMOs). Without safeguards, the same emission reduction could be counted by both the host country (where the reduction occurs) and the acquiring country (that uses it toward its NDC). To prevent this so-called double-counting, Article 6 requires corresponding adjustments. A corresponding adjustment is a bookkeeping correction to a country's emissions balance whereby the host country makes an addition to its reported emissions (or subtraction from removals) for the amount transferred and the acquiring country makes a subtraction from its emissions balance when it uses the transferred mitigation outcome toward its NDC.

57. The adjustment is applied at the point of first transfer and reflected when countries assess progress toward their NDCs.

58. The process for applying a corresponding adjustment includes a formal authorisation from the host country for the mitigation outcome for international use (e.g. toward another country's NDC or other purposes) and both countries apply corresponding adjustments in their NDC accounting, reported through biennial transparency reports.

59. Corresponding adjustments are essential to ensure that international carbon markets complement, rather than dilute, national ambition. They preserve the credibility of NDCs, maintain trust between parties, and underpin any high-integrity use of international mitigation outcomes under Article 6.

60. Whether or not a corresponding adjustment needs to be applied will depend on the use case for the relevant VCC and whether or not the transferred mitigation outcome is or is potentially being used towards the NDC of another country outside of the host country. In a compliance market whether or not a corresponding adjustment should be applied in respect of VCCs eligible for submission would be specified within the rules of that scheme, for example VCCs eligible for use in the CORSIA (see paragraph [xx] above) scheme must be correspondingly adjusted under the rules of that scheme. The use of VCCs in the voluntary market normally falls outside any NDC associated with the country of the buyer and there are no current rules requiring such VCCs to be correspondingly adjusted by the host country. However, in most cases buyers are requesting authorisation from the host country for the use of VCCs in the voluntary market to avoid the potential for error in accounting for emissions within the host country.

61. Where a VCC carries a corresponding adjustment, a label indicating this is embedded in the unique identifier of that VCC.

5. Tokenisation

62. 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;¹² and (ii) tokenised VCCs that mirror an existing registry-based VCC.¹³

63. 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.

64. 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.

65. Standardising data fields and lifecycle events on a blockchain that sits above the VCC registries supports greater fungibility between types of VCCs issued by different CBs and potentially paves the way for a truly global market.

66. 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 credits as well as automated data feeds into sustainability reporting systems once a corporate claim is made or a reporting period ends.

67. 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 standardized protocols, and strong connections

¹² 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](#).

¹³ For example J.P Morgan Kinexys that plugs into traditional registries and tokenises VCCs.

between blockchain platforms and traditional registries and express terms and conditions that recognise the intended link to maintain environmental integrity and prevent double-counting.

6. Summary

68. VCCs are units that have been 'issued' by a CB to represent one tonne of CO₂-equivalent of GHG emissions that have been independently verified as removed or reduced by a registered and validated project in accordance with the applicable CCP and methodology. Each CB has its own set of rules and terms of business and may be a government, the UN or a private entity. VCCs are an important tool for providing finance to emissions mitigation projects. Their importance and the size of the potential market is growing as the use case for VCCs expands in compliance and sectoral schemes, and as private entities are increasingly incentivised to purchase VCCs to make voluntary contributions to emissions 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. For transactions in VCCs to have the maximum efficiency, it is important to have clear rules that apply to the key aspects of these transactions (briefly described in Commentary [xx]). 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. Neutrality and the relationship of the Principles to national law

69. These Principles are designed to facilitate transactions in VCCs as defined in Principle 2(1) by providing legal certainty in relation to key issues of private law. The focus of the Principles is 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. For example, the Principles provide that a VCC can be the subject of proprietary rights, and set out the circumstances in which an innocent acquirer of VCC takes free of conflicting claims, and methods whereby a security right in VCCs 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.

70. [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. A VCC represents (or reifies) information, namely, a mitigation achievement, that is, the 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 a mitigation achievement (as defined in Principle 2(2)). While some VCCs do confer, on their holders, private law rights, such as transferable contractual rights against specific parties (see Commentary 2.4) this is not always the case, and so a VCC cannot be described as a 'bundle of rights'. A VCC can, of course, be the subject of contractual rights, for example, when there is a contract of sale of a VCC, and other contractual rights relate to the VCC, such as in a registry account agreement (see Principle 12(5)). However, the VCC itself is not a bundle of such rights. 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.]

71. As a result 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 intellectual property and consumer protection laws

remain unaffected by the Principles. Also, these Principles do not address many issues of national private law relating to contract and property law. Examples of these issues not addressed by these Principles include whether a proprietary right in a VCC has been validly transferred to another person, 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. 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.

72. [For transactions in VCCs to have the maximum efficiency, it is important to have clear rules that apply to the key aspects of these transactions (briefly described in Commentary [0.13 to 0.19]). Without predictable results, the transactions will have inherent inefficiencies and there will be greater costs and a reduction in the value of the transactions in commerce.

73. It is intended that these Principles will provide guidance to principals in the transactions covered by these Principles, their advisors (including lawyers), and the courts and others who will consider the legal effects of these transactions. In sum, these Principles aim to reduce legal uncertainty which practitioners, judges, arbitrators, legislators, and market participants would otherwise face in the coming years in dealing with VCCs.]

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

75. 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 jurisdictions, including common law and civil law systems. As a result, it is for the jurisdiction 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 jurisdiction, for instance, may elect to adopt a specific statute that is consistent with, or implements, these Principles as a whole. Alternatively, another jurisdiction may elect to implement these Principles into existing legislation and amend it as appropriate. In some jurisdictions, the Principles may 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.

76. 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 its rules should be included. Thus, a State may implement these Principles into a specific law on VCCs, but a State may also consider one or more of these Principles to follow from rules of general private law, commercial law, or consumer law. However, the organisational neutrality of these Principles does not mean that they can be implemented in such a way that their scope is more limited than that defined in these Principles.

77. 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.

78. It is recommended that States adopt legislation consistent with these Principles. This will have several benefits. It will increase the predictability of transactions involving VCCs that occur in those States. In addition, as these transactions frequently involve persons in different States, 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.

E. Transition rules

79. 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 19 and Principle 20 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.

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. These Principles may include some matters that may be characterised as regulatory law, but generally they 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.

Principle 2

Definitions

- (1) **'Verified carbon credit' or 'VCC' means a unit that represents a mitigation achievement of the equivalent to one tonne of CO₂ as a result of a carbon mitigation project if**
 - (a) **[the mitigation achievement has been achieved];**
 - (b) **The mitigation achievement is verified by a verification statement;**
 - (c) **The verification statement is approved by a CB;**
 - (d) **The unit is credited to an account in a VCC account registry;**
 - (e) **The unit is individuated using a unique identifier;**
 - (f) **[The carrying out of the relevant carbon mitigation project is not illegal under the law of the project host State at the time the VCC is created.]**
- (2) **'Mitigation achievement' means one of the following:**
 - (a) **a reduction in and/or avoidance of emissions of greenhouse gases into the atmosphere; or**
 - (b) **a removal of greenhouse gases from the atmosphere.**
- (3) **'Unit' means an intangible asset.**
- (4) **'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.**
- (5) **'Verified' means, in relation to an achievement of a reduction or removal, that a VVB has carried out a verification process resulting in a verification statement.**
- (6) **'Verification statement', in relation to a VCC, means a statement that there has been a mitigation achievement of the equivalent to one tonne of CO₂ as a result of the relevant carbon mitigation project in accordance with the applicable methodology.**
- (7) **'Verification process', in relation to a VCC, is a process carried out by a VVB resulting in a verification statement.**
- (8) **'VVB' (validation and verification body) means a legal person that, in respect of a verification process, is approved 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 carbon mitigation project or**
 - (ii) **who is to become or does become the first registered holder of the VCC****and**
 - (b) **produces a verification statement as a result of that verification process.**
- (9) **Carbon mitigation project**

- (a) 'Carbon mitigation project' means a project aimed at a mitigation achievement operating under the rules and requirements of a CCP.
 - (b) 'Relevant carbon mitigation project' means, in relation to a VCC, the carbon mitigation project from which the mitigation achievement represented by that VCC results.
- (10) '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 under the rules and requirements of which the relevant carbon mitigation project operates, including performance of all of the following functions:
 - (i) approval of the methodology applying to the relevant carbon mitigation project;
 - (ii) approval of the VVB that carries out the verification process relating to that VCC;
 - (iii) approval of the methodology to be applied by the VVB in the verification process relating to that VCC;
 - (iv) approval of the verification statement resulting from the verification process relating to that VCC.
 - (b) [is independent of any other natural or legal person who has undertaken the relevant carbon mitigation project or who is to become or does become the first registered holder of the VCC. *OR in the commentary say that a regulator could require independence.*].
- (11) 'CCP' (carbon crediting programme) means, in relation to a VCC, a programme of rules and requirements pursuant to which the relevant carbon mitigation project is registered and carried out, and the VCC is created.
- (12) Methodology
- (a) 'Methodology' means a set of requirements contained in the rules of a CCP for the implementation, [quantification][measurement], monitoring, reporting and assessment of achievement of a reduction or removal by a carbon mitigation project.
 - (b) The 'applicable methodology' in relation to a carbon mitigation project means that methodology approved by a CB as the methodology applying to that carbon mitigation project.
- (13) 'Creation' means the moment when a VCC comes into existence.
- (14) 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.
- (15) 'Cancellation' means the processes by which a VCC ceases to exist or is determined to have never existed.
- (16) 'Reversal' means the circumstances leading to the prospective cancellation of a VCC, irrespective of the consent of its registered holder, as set out in Principle 9(1).
- (17) '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).
- (18) 'Retirement' means the voluntary cancellation of a VCC on the instruction of its registered holder.
- (19) 'Principles law' means any part of a State's law which implements or is consistent with these Principles.
- (20) 'Other law' means a State's law to the extent that it is not Principles law.
- (21) '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.
- (22) 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 12 and 14 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(22) points out, the singular includes the plural. Normally a number of VCCs are created at the same time, since the mitigation achievement of a carbon 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 will be created. The Principles apply to those 1000 VCCs in the same way as they apply to one VCC. While it is not strictly necessary for a VCC to represent one tonne of CO₂ equivalent (as opposed to any other specific quantity) for it

to be capable of being the subject of proprietary rights under Principle 3(1), it is more straightforward to express these Principles in terms of a standard size of unit, namely one tonne.]

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 25-39 of the Introduction. The events leading up to the creation of a VCC are important, and in some cases, necessary precursors to the existence of that VCC. However, the VCC itself reifies the fact that these events have taken place and that (as verified, see Principle 2(5) and (6) and Commentary 2.10) a mitigation achievement (as defined in Principle 2(2)) equivalent to one tonne of CO₂ has thereby 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 represent additional facts, and may confer private law rights, such as transferable contract rights against specific parties (see further Commentary 9.7 and 10.5) However, because it is not always the case that a VCC represents these facts or confers these rights, they are not part of the constitutive elements in the definition for something to be a VCC within these Principles.

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 therefore can be transferred (see Principle 6), used as collateral (see Principle 18), held in custody (see Principle 14) 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(20)).

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 (see Commentary 3.2).

2.8 A crucial element of the definition of a VCC is that it 'represents' a mitigation achievement of the equivalent of one tonne of CO₂. A mitigation achievement 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 (see Introduction paragraph 18). The second is a removal of GHGs from the atmosphere. The mitigation achievement 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 32 of the Introduction.

2.9 The use of the term 'represents' in the definition of a VCC signifies that a VCC reifies the fact that there has been a mitigation achievement. This reification is a critical element of the definition of a VCC. The word 'represents' is carefully chosen and does not entail any legal conclusion that a person with a proprietary right to a VCC has a proprietary right to the underlying mitigation achievement. A mitigation achievement, on its own, lacks the determinacy and other attributes necessary for something to be the subject of proprietary rights in private law. It is precisely for this

reason that the definition of a VCC includes additional constitutive elements beyond merely the fact of a mitigation achievement. These constitutive elements must be met for a VCC to fall within the definition and therefore to be governed by the Principles.

2.10 The first constitutive element is that the mitigation achievement is verified by a verification statement (see Principle 2(5), (6) and (7) and see Commentary 2.17; Introduction paragraphs 29-33). Thus the mitigation achievement represented by a VCC is not just any mitigation achievement, but one that has undergone verification through a defined process. Moreover, the mitigation achievement represented by a VCC must have occurred as a result of a carbon mitigation project. This requirement reflects the reality that the creation and sale of a VCC is one of the methods by which carbon mitigation projects can be financed. A mitigation achievement that was achieved by other means would not be able to be represented by a VCC (as defined). The phrase 'carbon mitigation project' is defined in Principle 2(9).

2.11 The second constitutive element that must be present for a VCC to fall within the definition is that the verification statement must have been approved by a CB (defined in Principle 2(10); Introduction paragraph 31). 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 verification statement. Approval is the process by which the verification statement is linked to the registration of the VCC. 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 34-38). 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.

2.12 The CB who approves the report could be the same entity that runs the registry (the 'registry operator', see Principle 12(2)) although in these Principles these two people are treated as distinct as 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 it cannot have been registered without the verification statement having been approved by the relevant CB.

2.13 The third constitutive element that must be present for a VCC to fall within the definition is that the VCC must be recorded in a VCC registry. The term 'VCC registry' is defined in Principle 12(1). Who actually instructs the registry operator to record the VCC will vary. It could be the CB (defined in Principle 2(10)) who has approved the verification statement or, depending on the rules of the CB, the project proponent could be able to instruct the registry to register the VCC once the verification statement has been approved (see Introduction paragraph 31). 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 verification statement will relate to a mitigation achievement of a number of tonnes of CO₂ equivalent, and therefore that 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).

2.14 The fourth constitutive element is that the VCC must be individuated by a unique identifier. [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).

2.15 However, as set out in Principle 2(22), 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 then 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(4). [Care needs to be taken during this splitting process to make sure that there is no double counting].

2.16 Furthermore, as is made clear in Principle 12, a VCC is registered in a VCC registry by crediting it to an account of a person (a 'registry accountholder' as defined in Principle 12(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.

[2.16 bis The fifth constituent element that must be present for a VCC to fall within the definition is that, at the time of the creation of the VCC, it must not be illegal under the law of the State where the relevant carbon mitigation project (see Principle 2(9)(b)) to carry out that project. It is important to note that the time at which the question of whether the relevant carbon mitigation project is illegal is to be determined is the time that the VCC is created. It is also important that the meaning of 'illegal' is intended to be broad, and that it is to be determined by the law of the State in which the relevant carbon mitigation project is being carried out (the 'project host State').]

Verified

2.17 A verification process is a process carried out by a VVB (see Principle 2(8) and Commentary 2.18) to confirm that the stated mitigation achievement has in fact occurred as a result of the carbon mitigation project in accordance with the methodology. See also Introduction paragraphs 29–33. As a result of the process, the VVB will produce a statement that concludes either (a) that a mitigation achievement measuring the equivalent one tonne of CO₂ equivalent has taken place in the course of the carbon mitigation project, or (b) that it has not. The statement will [typically] give reasons for this conclusion. The achievement of a removal or reduction is verified if the verification statement reaches the first of these conclusions. The definition of a verification statement in Principle 2(6) makes it clear that the term 'verification' in the Principles means a verification statement that reaches conclusion (a). It should be noted that, although conclusion (a) is couched in terms of a mitigation achievement 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

2.18 A VVB (validation and verification body) is a legal person who carries out a verification. 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. While a VVB is likely to have many characteristics (such as being an expert in a particular field), only one characteristic is required by the definition for a person to be a VVB within the Principles (and therefore for a VCC (as defined) to be able to represent an achievement of a removal or reduction verified by that person). This characteristic is that the VVB is independent of any person who has undertaken the relevant carbon mitigation project (such as the project proponent or project developer, see Introduction paragraph 26), or who is to become or does become the first

registered holder of the VCC (while this would often be the project proponent, see Introduction paragraph 38, 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 VCC, so that something representing a removal or reduction 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 verification body], to carry out such verifications.

Carbon mitigation project

2.19 As mentioned above, it is only if the mitigation achievement results from a carbon mitigation project that it can be represented by a VCC as defined in the Principles. The definition of a carbon mitigation project in Principle 2(9) makes it clear that a carbon mitigation project is one aimed at a mitigation achievement. The way in which a carbon mitigation project is typically developed and carried out is described in detail in the Introduction paragraphs 25-33.

CB

2.20 A CB (carbon body) is defined in Principle 2(10). A CB is a generic term for an entity that administers crediting programmes. Different types of entities can be a CB. For example, a legal person would run one or more CCPs (in relation to CCPs, see Commentary 2.21). A governmental body would run a government CCP, and an inter-governmental body such as the United Nations would run a UN CCP (see Introduction paragraph 21). 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 four activities listed in Principle 2(10) are carried out by an entity that it is a CB for the purpose of these Principles. These required activities are: in relation to the relevant carbon mitigation project (the project from which a particular VCC emanates), approving the applicable methodology; and in relation to the verification process, approval of the VVB who carries out that process, approval of the methodology to be applied during that process and approval of the 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 crediting programme. 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.

CCP

2.21 A carbon crediting programme (CCP) is a type of crediting programme developed by a CB. It consists of rules and requirements under which carbon 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.

Methodology

2.22 The definition of a methodology makes it clear that it is a set of requirements relating to the mitigation by a carbon 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 25. 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 carbon mitigation project as a result of which the achievement of the reduction or removal represented by the VCC occurs. In relation to a particular VCC (or VCCs) the verification process relates to the 'applicable methodology', thus ensuring that the mitigation

achievement is verified as resulting from a particular carbon mitigation project (see Commentary 2.17 above).

Creation

2.23 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

2.24 A transfer, as defined in Principle 2(14), 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.

2.25 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.

2.26 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 14(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.

2.27 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, which may vary across jurisdictions.

2.28 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 has the power to transfer rights to an innocent acquirer (see Principle 6(2) and Commentary 6.2 to 6.4)].

Cancellation

2.29 Before dealing with reversal, revocation, and retirement, it is helpful to explain cancellation (Principle 2(15)) as cancellation is the umbrella concept that is the opposite of creation and when a VCC is cancelled it ceases to be or is determined to never have been the subject of a proprietary right (see Principle 8). Reversal, revocation, and retirement are the different processes that result in a VCC being cancelled. Cancellation may be prospective or retrospective depending on whether a VCC is cancelled for reversal, revocation, or retirement. Generally, reversals and retirements are prospective ('ceases to exist'), whereas revocations are retrospective ('is determined to have never existed'). The precise timing of each process of cancellation is dealt with under their respective Principles: Principle 9(3) for reversal; Principle 10(3) for revocation, and Principle 11(2) for retirement.

Reversal

2.30 Similarly to revocation (Principle 2(17)) and retirement (Principle 2(18)), a reversal can lead to the cancellation of a VCC (see Principle 9 read with Principle 8). Principle 2(16) and Principle 9(1) distinguish reversal from revocation and retirement, however, in that cancellations for reversal are the result of a VCC no longer meeting the definition in Principle 2(1) as a result of events that occur after the VCC is created. This involves events leading to a loss or diminution of the mitigation achievement of a carbon mitigation project. Beyond Principle 8, which deals with the effect of cancellation generally, Principle 9 clarifies the proprietary consequences of cancellations for reversal and its Commentary further clarifies other legal consequences that could follow.

Revocation

2.31 Similarly to reversal (Principle 2(16)) and retirement (Principle 2(18)), a revocation leads to the cancellation of a VCC. However, unlike either of those events, cancellation for revocation is generally retrospectively effective from the outset (see Principle 10 read with Principle 8), with the exception of circumstances set out in Principle 10(7). Principle 2(17) distinguishes revocation from reversal and retirement, however, in that revocations are the result of events leading up to the time when the VCC is created, typically fraud, that lead to the issuance of VCCs that never met the definition of 'VCC' in Principle 2(1) at the time of creation and would, absent those events, not have been created. Beyond Principle 8, which deals with the effect of cancellation generally, Principle 10 clarifies the proprietary consequences of cancellations for revocation and its commentary further clarifies other legal consequences that could follow.

Retirement

2.32 Similarly to reversal (Principle 2(16)) and revocation (Principle 2(17)), a retirement of a VCC results in its cancellation (see Principle 11 read with Principle 8). Unlike reversal and revocation, however, which result in the cancellation of a VCC regardless of the intent of its registered holder, cancellation for retirement follows from the instruction of a registered holder (or a user authorised by the registered holder) and thus is dependent on its intent. Again unlike reversal and revocation, cancellation by way of retirement marks the end of the intended normal 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 14). In such cases, the registered holder will be acting on agency or other similar legal principles (see Principle 11). A registered holder might choose to retire a VCC for a number of reasons. The Principles are neutral on the reason for retirement.

Principles law and other law

2.33 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. *[treatment on insolvency maybe others]*. 'Principles law' as defined by Principle 2(19) 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(20)). '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

2.34 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(21) 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(21), 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.

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)). '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 12(4)). That registry accountholder (who becomes, on registration of a specific VCC, the 'registered holder' of that VCC, (see Principle 12(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 proprietary rights.

3.3 [Whether VCCs can be the subject of proprietary rights (a legal consequence) must be distinguished from the classification of them in any particular jurisdiction. For example, in certain jurisdictions a VCC could be classified as 'property', 'a good', 'a thing' or a similar concept, but this would depend on the applicable law in question and is left for each State to decide. If the law of a State includes a classification of different categories of assets that can be the subject of proprietary rights, and these different categories have different consequences, it is recommended that the law of that State should specify which category or categories of assets VCCs are. That is in order that VCCs can be the subject of proprietary rights in that State. This could mean the introduction of a new category of assets, but again, this is left for each specific State to decide.]

3.4 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)

3.5 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(19)) take precedence over other law (as defined in Principle 2(20)).

Principle 3(4)

3.6 Principle 3(4) makes it explicit that other law (as defined in Principle 2(20)) 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, because 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(14) 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, as a matter of principle, 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 19, 20 and 21).

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 qualification of the relationships between those parties.

3.10 As explained above, Principles 3(4)(d) and 3(4)(e) concern the (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) and 3(4)(g), 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 18).

[Commentary to also address Principle 3(4)(h)-(i) following WG discussion]

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) 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 [third-party] 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 on of any underlying carbon mitigation project, including land use, community rights, indigenous rights, or human rights;
 - (b) the submission of VCCs for compliance, taxation or regulatory purposes;
 - (c) contractual rights and obligations arising from agreements relating to VCCs;
 - (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 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 registry is maintained.
- (4) The choice may be made in the general rules of the registry [or in the account agreements]. The existence and validity of the choice shall be 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* shall be 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 stays 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 only for the VCC registered holder who has consented to it. 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, effectiveness between the parties, and extinction of a security right in a VCC are governed by the law of the State in which the grantor is located.]**
- (8) The 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) Nothing in this Principle prevents courts from refusing the application of a foreign law that is incompatible with their public policy (*ordre public*), and from applying overriding mandatory rules, which apply independently of the law otherwise applicable.**
- (10) Without prejudice to paragraphs 1, [7], 8 and 9, the legality of the underlying carbon mitigation project [at the time the VCC was created] is governed by the law of the project host State.**
- (11) For the purposes of this Principle, “law” means the law of a State or the law of a territorial unit of a State. The application of such a law means the application of the rules of law in force in that State other than its rules of private international law.**
- (12) This Principle is without prejudice to, and shall be applied in conformity with, 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 in particular on proprietary rights. It does not concern other questions, such as contractual or tort law or regulatory 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 2.32 highlights, 'Principles law' as defined by Principle 2(19) 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 [secondary] market on which VCCs are traded and does not concern other questions in the lifecycle of VCCs, such as the law governing the project, save to the extent that illegality may trigger the revocation or cancellation of VCCs [or prevent the VCC from meeting the definition of Principle 2(1)(e)].

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. It also does not concern matters related to the carrying out of any underlying carbon mitigation project, including land use, 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.

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 cancellation of a VCC which is the subject of proprietary rights. Cancellation may occur through the reversal, revocation, or retirement of the VCC.

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, possess, 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 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 the 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 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 on of any underlying carbon mitigation project, including land use, community rights, indigenous rights, or human rights; 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; 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' does not cover proprietary issues regarding the VCC in relation to rights that are not constituted under the law governing the insolvency proceedings (*lex concursus*). This includes transfers, whether made before or after the opening of these insolvency proceedings. In particular, 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 proceedings allows them to do so with respect to assets that fall within the proceedings.

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 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 VCC project does not lend itself as a connecting factor when it comes to determining the law applicable to proprietary issues in respect of VCCs. 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 VCC 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 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 secondary 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 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 registry itself can serve as the central point of reference for determining the law governing proprietary issues. The registry is where the holders of VCCs are recorded and forms the starting point for every substantive law analysis of proprietary rights in them. The registry is the lynchpin 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 registry is hosted may be located in another country 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 ¹ or in the account agreement ². Given the large number of customers, negotiations will rarely be possible, and the individual customer will have no other choice than to take the choice suggested to her 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 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 registry is maintained.

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

4.27 The choice of law in the 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 registry has 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 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 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 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 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 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 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 VCCs, 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 holders of the VCCs. This requirement ensures that the law governing the 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 VCC holders who (a) are recorded in the registry and (b) have consented to the change. The VCCs of those holders 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 rule refers to the 'registered holders' and not the 'owners' of the VCC. This ensures that a change in the law does not create insurmountable obstacles. 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. In such cases, the VCCs will continue to be governed by the law applicable prior to the transfer for those registered VCC holders 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 paragraphs 3–5. It provides that the creation, third-party effectiveness, priority, effectiveness between the parties, 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 her habitual residence or the (principal) place of business.

4.47 Since security rights made effective under the law of the grantor might compete with other rights made effective under the law designated according to Principle 4(1), a supplementary rule is needed to determine which right becomes effective against third parties. In accordance with the aim of legal certainty and foreseeability, such a rule gives priority to the right that becomes first effective against third parties under its applicable law.

Principle 4(8)

4.48 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.

4.49 The advantage of this rule is that it allows for the rise of intermediaries in VCCs. 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 intermediated securities and digital assets, 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 host VCCs recorded in different registers, and become a one-stop shop for investors, which is important if the market is scaling up and the number of registers increases. To cater for such a development, it makes sense to provide for a different law than the one governing each VCC register. 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.

Principles 4(9)

4.50 Principle 4(9) 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 VCC projects.

4.51 Principle 4(6) also highlights that overriding mandatory rules of the forum remain applicable. These rules apply independently of the normally governing law according to Principle 4(1)-(5). Examples are 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(10)

4.52 Principle 4(10) gives prominence to the law of the project host State with regards to the legality of the underlying carbon mitigation project. Illegality may trigger revocation of a VCC which is the subject of proprietary rights. Principle 4(10) does not affect the treatment of 'proprietary matters' that fall within the scope of the other laws designated by Principle 4. This is why paragraph 10 begins with a without-prejudice clause in favour of those paragraphs and only subsequently brings the law of the host State into play.

4.53 [This Principle aligns with Principle 2(1)(f), which includes legality in the definition of a VCC, and Principle 10, which provides that the illegality of the project constitutes a specific ground for revocation, thereby leading to cancellation. Since illegality is to be assessed at the time the VCC was created, Principle 4(10) correspondingly takes in the same temporal point].

4.54 The question of which authority has the task or jurisdiction to assess illegality apart from the CB is a matter for other law. In practice, however, the VCC registry is the primary body tasked with implementing revocation, where necessary upon order of local courts.

Principles 4(11)

4.55 Principle 4(11) qualifies the term 'law' in Principle 4. On the one hand, 'law' refers to the law of a State or the law of a territorial unit of a State'; on the other hand, 'law' is intended as excluding the rules of private international law of the relevant State.

Principle 4(12)

4.56 Principle 4(12) makes express reference to the UNFCCC and the Paris Agreement in order to ensure that Principle 4 is applied consistently with the broader international framework of obligations and mechanisms related to climate change. The expression 'where applicable' acknowledges that VCCs may be created either within or outside those frameworks.

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SECTION III: CREATION AND TRANSFER

Principle 5

Creation

- (1) 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.**
 - (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 verification statement (see Principle 2(1)(c) and Commentary 2.11) and individuation of the VCC using a unique identifier (see Principle 2(1)(e) and Commentary 2.14) 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. Typically registration and the allocation of a unique identifier will take place at the same time. At that point, Principle 3(1) applies and it can be the subject of proprietary rights.

5.2 In these Principles, the singular includes the plural (Principle 2(22)). This is for ease and precision of drafting. However, in most, if not all, cases, a carbon mitigation project will achieve a reduction in, or a removal of, emission of GHGs from the atmosphere equivalent to more than one tonne of CO₂ equivalent. Thus, the verification report will relate to a reduction in, or a removal of, emission of GHGs from the atmosphere equivalent to more than one tonne of CO₂ equivalent, which will be represented by more than one VCC. In many cases, as mentioned in Commentary 2.15, 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 2.15). 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 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. In practice, that person is usually the project proponent, 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 38).

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 12(6)) (see Principle 14(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 14(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 17(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 Principle 7, which sets out the circumstances in which a person will take a VCC free from conflicting claims, and which is a matter of Principles law.

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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.

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 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 trustee 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 trustee 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 recognizes 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). As indicated by Principle 7(4)(c), provided these requirements align with that State's existing good faith acquisition and take-free rules for other types of assets. 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 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 revocable or reversible because it is demonstrated that creation requirements were never satisfied from the outset or because, due to subsequent events, it ceases to meet the definition of a VCC (see Principles 9 and 10 on Reversal and 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: CANCELLATION

Principle 8

Cancellation

- (1) A VCC can be cancelled as a result of a reversal, because it has been revoked, or when it is retired.**
- (2) A VCC that is cancelled 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 cancellation.**
- (3) A VCC can only be cancelled wholly and not in part.**
- (4) Upon cancellation,**
 - (a) the VCC registry must not comply with any instruction given by the registered holder or a user authorised by the registered holder to move or cancel for retirement or otherwise use the cancelled VCC.**
 - (b) the VCC registry no longer owes the VCC's registered holder the duty set out in Principle 13(1)(c).**
 - (c) the VCC registry must record that the VCC is cancelled if it retains a record of its prior existence.**
- (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 (Cancellation) are only intended to affect proprietary rights in relation to VCCs and not contractual rights, which are a matter for other law.**

Commentary

8.1 Principle 8(1) provides that there are three categories of events that can lead to a VCC's cancellation. These are respectively, reversal (see Principle 9), revocation (see Principle 10), and retirement (see Principle 11). Cancellations resulting from reversal and revocation differ from cancellations resulting from retirement in that retirement is the voluntary cancellation of a VCC on the instruction of its registered holder whereas reversal and revocation are not, or at least not necessarily.

8.2 Principle 8(2) provides that a VCC that has been cancelled ceases to be capable of being the subject of a proprietary right, 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 Principles 8 through 11 refer to singular VCCs, cancellations, particularly in relation to reversal (see Principle 9) and revocation (see Principle 10) are unlikely to involve singular VCCs since carbon mitigation projects do not result

in the issuance of singular VCCs. It is important to bear in mind that words in the singular include the plural (see Principle 2(22)).

8.3 Principle 8(3) provides that cancellations cannot result in a fractional VCC. This is principally to address the consequences of either reversal (Principle 9) or revocation (Principle 10) since retirement (Principle 11) does not, following current practices, create any opportunities for partial cancellation. Since each VCC represents the achievement of a reduction in, or removal of, emission into the atmosphere of GHGs equivalent to one tonne of CO₂ equivalent, any reduction of the same to less than one tonne of CO₂ equivalent will result in the cancellation of the entire VCC even if there was the achievement of a reduction in, or removal of, emission into the atmosphere of GHGs equivalent to a fraction of one tonne of CO₂ equivalent, e.g. 0.99 tonne of CO₂ equivalent.

8.4 Principle 8(4) articulates the consequences of cancellation on the relationship between the registered holder of a VCC and the VCC registry. Since the VCC ceases to be capable of being the subject of proprietary rights, Principle 8(4)(a) clarifies that it cannot be moved to another registry account nor can it be cancelled for retirement again on the instructions of its registered holder. Some CBs today treat reversals and revocations similarly to retirements in that they seek the instructions of registered holders before cancellation for reversals or revocations. Needless to say, once a VCC has been cancelled, it cannot be cancelled again for any reason. However, Principle 8(4)(a) makes no reference to instructions by a registered holder to cancel a VCC for reversal or revocation because under these Principles, the consent of a registered holder is irrelevant to such cancellations (see Principle 2(14) and 2(15)). Principle 8(4)(b) 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. Principle 8(4)(c) 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(4)(c) does not prescribe how records are to be maintained. Thus, for some registries (e.g. Verra), cancelled VCCs are transferred to a cancellation account and cancelled there. Principle 8(4) should be read with Principle 13(1)(c), 13(6) and 13(7), which sets out the obligations of the registry operator in relation to instructions by its registered holder. Where the cancellation is retrospective (see Principle 8(5) and Principle 10), any records that are maintained should indicate this.

8.5 Principle 8(5) provides that the effective time of cancellation of a VCC will depend on the cause for cancellation. Whereas this is generally prospective and effective when a VCC registry makes an entry in its records (see Principle 9 and Principle 11), in the case of revocation, the cancellation is retrospective because the VCCs are void *ab initio* (see Principle 10).

8.6 Principle 8(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.

8.7 Principle 8(7) clarifies that Section IV of the Principles on 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 9(4) and 10(4) (see also Commentary 2.4), which deal with rights that follow certain VCCs, such as those under the Verra system in which holders may have rights against the VVB under certain circumstances.

Principle 9

Reversal

- (1) A VCC can be cancelled for reversal where it no longer meets the definition of a VCC because of events after its creation.**
- (2) A VCC can be cancelled for reversal by a CB in accordance with the [rules of that CB], by a court, or by a competent authority determined by other law.**
- (3) A cancellation for reversal is effective at the time the VCC registry makes an entry indicating its cancellation as such.**
- (4) Although a VCC ceases to be the subject of proprietary rights after cancellation for reversal, cancellation for reversal does not affect such rights that form part of or relate to the VCC that its holder may have against any parties (if any).**
- (5) Any cancellation for reversal 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 carbon mitigation project at the time of creation and notified to all registered holders;**
 - (c) in accordance with any order established by a CB in its general rules applicable to carbon 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 carbon mitigation project.**
- (6) Where cancellation for reversal affects several carbon mitigation projects, any cancellation for reversal should be effected in the following order across the projects:**
 - (a) in accordance with any order established by the various project proponents with the approval of a CB in relation to the particular carbon mitigation projects;**
 - (b) in accordance with any order established by a CB in its general rules applicable to those carbon mitigation projects; or**
 - (c) on a pro rata basis among all affected carbon mitigation projects.**

Commentary

9.1 Principle 9(1) provides that a VCC can be cancelled for reversal where it no longer meets the definition of a VCC under Principle 2. Such cancellation occurs where the climate mitigation achievements of a carbon mitigation project have been compromised post-issuance, for example, where CO₂ that had been captured has escaped into the atmosphere. Cancellation for reversal can be distinguished from cancellation for revocation (Principle 10) as the former relates to matters post-issuance whereas the latter relates to matters pre-issuance. Principle 9(1) is in line with the treatment of existing intangible property such as trademarks that can be cancelled for non-use subsequent to registration. Accordingly, Principle 9 is essential to promote adoption of the Principles

as a whole as no significant legal system has conceived of a form of intangible property that is defined as having certain characteristics but which maintains its existence even if it loses one or more of those characteristics.

9.2 Principle 9 is also essential to maintain the integrity of VCC markets since the continued existence of VCCs as the subjects of proprietary rights even when they no longer meet the definition set out in Principle 2 will undermine confidence in the VCC market. Principle 9 is not intended to preclude the use of mechanisms such as buffer pools to avoid or limit the impact of reversal events on VCC holders. In some carbon mitigation projects (notably those involving nature-based carbon capture), buffer pools are created by the issuance of fewer VCCs than the total GHG emission reductions or removals produced by the relevant carbon mitigation project. In such case, a reversal event resulting in a reduction of GHG benefits does not require the cancellation of any VCCs so long as the total number of VCCs outstanding is less than or equal to the total GHG benefits relating to the carbon mitigation project.

9.3 Some buffer pools currently in existence apply a mutualisation scheme by which GHG benefits from multiple carbon mitigation projects can be used to avoid reversals from any one of those projects. Such mutualisation schemes cannot be accommodated within the current Principles conceptualising VCCs as the subject of proprietary rights since there is no concept of sacrificing one property to sustain another in the law of property. Accordingly, buffer pools that employ such mutualisation schemes are only compatible with a purely contractual conception of VCCs (i.e. VCCs are *not* the subject of proprietary rights). To be compatible with VCCs as the subject of proprietary rights, such schemes would have to be reconceptualised as providing for the delivery of contractually agreed replacement VCCs from multiple other carbon mitigation projects to avoid the loss from cancellation of any VCCs because of any particular carbon mitigation project being affected by reversal (i.e. where the buffer pool contributed by the particular project is insufficient, resulting in the cancellation for reversal of some or all VCCs). This contractual arrangement can be provided in the rules of the CB if this has been notified and accepted by all registered holders. These Principles do not provide specifically for any of this because these Principles only address matters affecting proprietary rights in relation to VCCs and not contractual rights, which are a matter for other law (see Principle 8(7)).

9.4 Principle 9(2) sets out the bodies that are able to initiate a cancellation for a reversal event. These include the CB acting in accordance with the rules of the relevant CCP as well as a court and such regulatory body (if any) as set up under other law. The question of who has standing to initiate a court action that leads to a court order to cancel a VCC for reversal is a matter for other law.

9.5 Principle 9(3) clarifies that the time of cancellation of a VCC, should this come to pass, is the time when the VCC registry updates its records as such. This avoids any dispute as to when the cancellation of a VCC is effective. Since cancellation for reversal is only effective when a VCC registry updates its records regardless of when the event of reversal occurs, it follows that it is not possible to cancel a VCC for reversal if the VCC has already been cancelled for retirement even if the event of reversal occurred before the instructions for retirement, and hence cancellation for retirement, occurred.

9.6 The problem of how VCCs that have been used to claim for certain benefits (e.g. tax benefits) by a beneficial owner who is aware of the event of reversal but who retires the VCCs before they can be cancelled for reversal, is a matter for regulatory and other law and is beyond the scope of these Principles.

9.7 Although Principle 9(4) reemphasises that upon cancellation for reversal, a VCC ceases to be the subject of proprietary rights, it provides that where the cancellation follows from reversal, to the extent that a VCC comprises rights against certain parties, those rights survive cancellation of the VCC. This is different from cancellation following retirement, for which such rights are not preserved.

Principle 9(4) ensures that the market will properly price in the difference between VCCs that carry rights against certain parties (such as a VVB) and VCCs that carry no rights whatsoever. A VCC may carry rights of replacement or monetary compensation for cancellation for reversal and/or revocation against certain parties, most likely the project proponent or VVB, under certain circumstances. VCCs that carry rights of replacement should set out the characteristics of acceptable replacement VCCs. Whether or not a proposed replacement VCC meets those requirements is a matter for other law, as is the assessment of monetary compensation. Principle 9(4) is distinct from Principle 8(5), which deals with rights following an erroneous cancellation, as Principle 9(4) addresses legal rights (if any) inherent in a VCC (see Commentary 2.4), which survive a cancellation following reversal that is not in error.

9.8 Principle 9(5) provides for a waterfall schema for the cancellation of VCCs with the default rule in Principle 9(5)(d) adopting the general property law rule of pro rata sharing of losses as this is the fairest rule of loss allocation.

9.9 Principle 9(5)(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 9(5)(c)) or a particular regime peculiar to a particular project (Principle 9(5)(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 reversal. 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 9(5)(d).

9.10 It is theoretically possible as well that VCCs within a project or a programme are issued in tranches of varying seniority pursuant to Principle 9(5)(c) or (b), with junior tranches being cancelled ahead of senior tranches, with the result that they would be differentially priced by the market.

9.11 Furthermore, Principle 9(5)(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 reversal), Principle 9(5)(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 reversal of B's VCCs.

9.12 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 20(2)(b)) invokes Principle 9(5)(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 20(2)(b)) invokes Principle 9(5)(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 20(2)(b)) is a matter for other law.

9.13 Principle 9(5)(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 9(5)(a), (b), or (c), the provision of

rights of replacement or compensation as part of a VCC (see Commentary 9.3), 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 reversal 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.

9.14 Principle 9(6) provides for a waterfall schema for the cancellation of VCCs across several carbon mitigation projects where a reversal affects several projects but it is unclear which particular project is affected and which is not. For example, where there are several carbon mitigation projects that employ carbon storage to achieve their mitigation outcome and there is a leak from the storage. Principle 9(6) only applies where it is unclear which carbon mitigation project(s) are affected by a reversal. Thus, if the storage facility comprises separate compartments and it is known which compartments are used by each carbon mitigation project, then the compromise of a particular compartment can only affect that particular project and not be shared via Principle 9(6). The default position in Principle 9(6)(c) is that the cancellation is shared pro rata across the various carbon mitigation projects but Principle 9(6)(a) and (b) allow the carbon mitigation projects with the concurrence of the CB or the CB in its general rules to specify a different allocation system between the projects. For example, they can adopt a first in-first out rule so that losses are allocated to the first project initially followed by subsequent projects or one carbon mitigation project could be designated a senior project vis-à-vis another so that any reversal affects the other project before affecting it. Where a particular project's VCCs are not entirely affected by such cancellation, then the allocation of cancellation for reversal between holders within that project is determined following Principle 9(5).

Principle 10

Revocation

- (1) A VCC can be cancelled for revocation where it is subsequently demonstrated that it did not meet the definition of a VCC at the time that VCC was created.**
- [(1) A VCC can be cancelled for revocation where:**
 - (a) it is subsequently demonstrated that it did not meet the definition of a VCC at the time that VCC was created; or**
 - (b) the carrying out of the relevant carbon mitigation project was illegal under the law of the project host State at the time the VCC is created.]**
- (2) A VCC can be cancelled for revocation by a CB in accordance with the [rules of that CB], by a court, or by a competent authority determined by other law.**
- (3) Subject to Principle 10(7), a VCC that has been revoked is void from the outset and never existed as the subject of proprietary rights.**
- (4) 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).**
- (5) 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.**
- (6) 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 carbon mitigation project at the time of creation and notified to all registered holders;**
 - (c) in accordance with any order established by a CB in its general rules applicable to carbon 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 carbon mitigation project.**
- (7) Where cancellation for revocation affects several carbon mitigation projects, any cancellation for revocation should be effected in the following order across the projects:**
 - (a) in accordance with any order established by the various project proponents with the approval of a CB in relation to the particular carbon mitigation projects;**
 - (b) in accordance with any order established by a CB in its general rules applicable to those carbon mitigation projects; or**
 - (c) on a pro rata basis among all affected carbon mitigation projects.**

- (8) Where a VCC is subsequently demonstrated not to have met the definition of a VCC at the time of creation as a result of evolving scientific knowledge, cancellation for revocation is only effective at the time the VCC registry makes an entry indicating its cancellation as such.**

Commentary

10.1 Principle 10(1) provides that a VCC can be cancelled when it is subsequently demonstrated that it never met the definition of a VCC under Principle 2. Such cancellation occurs where it is subsequently shown that the benefits of a carbon mitigation project or programme were never achieved in the first place, leading the VCCs to be revoked. This could be for a variety of reasons. For example, VCCs can be revoked because the project or programme failed to abide by the methodology of a CCP; the verification process is shown to have been compromised; or the methodology of a CCP is shown to be flawed. Such failure is not always intentional and can be caused by error or other events. In each of these examples, the claimed benefits of a project or programme were never achieved at the outset, thus distinguishing cancellation for revocation from cancellation for reversal.

[10.1bis The alternative draft of Principle 10(1) provides that a VCC can be cancelled when it is subsequently demonstrated that it never met the definition of a VCC under Principle 2 and if the carrying out of the relevant carbon mitigation project was illegal under the law of the project host State at the time the VCC is created. Regarding illegality, it is important to note that the time at which the question of whether either of these activities is illegal is to be determined is the time that the VCC is created. It is also important that the meaning of 'illegal' is intended to be broad, and that it is to be determined by the law of the State in which the relevant carbon mitigation project is being carried out (the 'project host State').]

10.2 Principle 10(2) sets out the bodies that are able to initiate a cancellation for revocation. These include the CB acting in accordance with the rules of the relevant CCP as well as a court and such regulatory body (if any) as set up under other law. The question of who has standing to initiate a court action that leads to a court order to cancel a VCC for revocation is a matter for other law.

10.3 Principle 10(3) provides that a VCC that has been revoked is void from the outset and was never the subject of proprietary rights. This is consistent with the effects of invalidity for other categories of intangible property, such as patents where it is subsequently demonstrated that a key element for the grant of the patent was never attained in the first place. This is a necessary consequence of treating VCCs as capable of being the subject of proprietary rights since no significant legal system conceives of intangible assets that are defined as having certain characteristics but which somehow maintain an existence—however temporary—even if it is demonstrated that they never had one or more of those characteristics.

10.4 Principle 10 does not deal with the consequences of such invalidity as this would not be a matter of the law relating to proprietary rights but of the law relating to contract (see Principle 8(7)) and/or restitution. For example, parties can (and often do in the case of patents) undertake the risk of a patent being invalid so that any benefits conferred pursuant to a licence or sale are not subject to restitution because the risk of invalidity is contractually allocated to a licensee/purchaser of the patent. By way of contrast, in some jurisdictions, the law may provide that a seller warrants that it has title in the subject-matter of a sale (as many common law jurisdictions do in relation to the sale of goods) or the parties may contractually do so themselves. Where this is the case, a purchaser may be able to claim restitution [of the price paid] or replacement VCCs from the seller of such property should it turn out that the subject-matter was void. However, as these are not matters relating to proprietary rights, these Principles do not address them and it is up to the participants in the VCC markets to contractually allocate these risks themselves as permitted by Principle 8(7).

10.5 For example, if a purchaser is unwilling to undertake the risk of cancellation *ab initio*, then it may require a seller to contractually undertake that the VCCs sold exist, which would afford the buyer a claim for compensation from its seller should the VCCs be subsequently revoked. Conversely, if a seller wishes to be assured that it is not liable to a buyer, the contract can clarify that the buyer undertakes the risk of subsequent cancellation, thereby forestalling any claim in contract and/or restitution.

10.6 The proviso to Principle 10(3) addresses concerns over the *ab initio* effect of revocation (see Commentary 10.8), introducing a condition to revocation unknown to any form of intangible assets currently in existence, which are simply void *ab initio* whenever it is subsequently discovered that they never met the definition set out by law for their creation.

10.7 Although Principle 10(4) reemphasises that, upon cancellation for revocation, a VCC was never the subject of proprietary rights, it provides that where the cancellation is for revocation, to the extent that a VCC comprises rights against certain parties, those rights survive cancellation of the VCC. This is different from cancellation following retirement, for which such rights are not preserved. Principle 10(4) ensures that the market will properly price in the difference between VCCs that carry rights against certain parties (such as a VVB,) and VCCs that carry no rights whatsoever. Principle 10(4) is distinct from Principle 8(5), which deals with rights following an erroneous cancellation, as Principle 10(4) addresses rights (if any) inherent in a VCC (see Commentary 2.4), which survive a cancellation for revocation that is not in error.

10.8 Principle 10(5) follows from Principle 10(3), requiring a VCC registry to especially note that a cancellation for revocation is, unlike cancellations for reversal (Principle 9) or retirement (Principle 11), retrospective so that the VCC is void from the outset. Accordingly, a VCC that has already been cancelled for reversal or retirement may nevertheless be cancelled for revocation and have the cancellation backdated to the time of creation. The consequences of such a retrospective cancellation, particularly in the context of retirement where certain benefits (e.g. tax benefits) have been claimed, is a matter for regulatory and other law and is beyond the scope of these Principles.

10.9 Principle 10(6) introduces the same waterfall provision as applicable to Principle 9 to address instances where revocation is partial since, although Principle 10 is drafted in the singular, the singular includes the plural (see Principle 2(22)). Although it is possible that revocation results in the cancellation *ab initio* of all VCCs related to a carbon mitigation project, for example when the entire project was fraudulent, it is more likely that only part of the VCCs created are affected. For example, it may be that a particular carbon mitigation project resulted in the creation of 1,000 VCCs because the verification statement verified that the equivalent of 1,000 tonnes of CO₂ were removed from the atmosphere by the project. Subsequently, it is discovered that the measuring equipment was faulty so that only 600 tonnes of CO₂ were removed. In this example, 400 out of 1,000 VCCs would have to be cancelled for revocation. The sequence of cancellation is set out in Principle 10(6)(a)-(d), which sets out a similar waterfall provision as that applicable to Principle 9. The same considerations apply.

10.10 Principle 10(7) provides for a waterfall schema for the cancellation of VCCs across several carbon mitigation projects where a revocation affects several projects but it is unclear which particular project is affected and which is not. For example, where there are several carbon mitigation projects that employ carbon storage to achieve their mitigation outcome and there is a leak from the storage that affected the storage from the outset. Principle 10(7) only applies where it is unclear which carbon mitigation project(s) are affected by a revocation. Thus, if the storage facility comprises separate compartments and it is known which compartments are used by each carbon mitigation project, then the compromise of a particular compartment can only affect that particular project and not be shared via Principle 10(7). The default position in Principle 10(7)(c) is that the cancellation is shared pro rata across the various carbon mitigation projects but Principle 10(7)(a) and (b) allow the carbon mitigation projects with the concurrence of the CB or the CB in its general rules to specify

a different allocation system between the projects. For example, they can adopt a first in-first out rule so that losses are allocated to the first project initially followed by subsequent projects or one carbon mitigation project could be designated a senior project vis-à-vis another so that any revocation affects the other project before affecting it. Where a particular project's VCCs are not entirely affected by such cancellation, then the allocation of cancellation for revocation between holders within that project is determined following Principle 10(6).

10.11 Principle 10(8) is a concession to industry concerns about the special precarity of VCCs. Where VCCs are shown to have not achieved the reduction in environmental benefits through the advance of scientific knowledge, instead of cancellation *ab initio*, revocation will treat the cancellation as effective from the time the VCC registry makes an entry of cancellation. Such cancellations would in effect be prospective rather than retrospective and similar to Principle 9 rather than Principle 10.

[*Commentary may be updated with any relevant examples provided by the Working Group*]

DRAFT

Principle 11

Retirement

- (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 retire a VCC, whereupon the VCC registry must cancel the VCC forthwith unless it is exempted from doing so by Principle 13(1)(d)(i) or (ii).**
- (2) A VCC is cancelled for retirement when the VCC registry makes an entry indicating its cancellation as such.**

Commentary

11.1 Principle 11(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 retire 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) 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 11(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 retire a VCC as Working Group participants indicated a preference for VCC registries to provide their own requirements for instructions.

11.2 Principle 11(2) specifies that the time at which cancellation for retirement 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 retirement are given, providing certainty as to when retirement occurs.

11.3 Some VCC registries issue retirement certificates upon the retirement of a VCC. However, since retirement certificates are not themselves VCCs, Principle 11 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.

[*Commentary may be updated with any relevant examples provided by the Working Group*]

SECTION V: REGISTRY

Principle 12

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 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.**

Commentary

12.1 Principle 12 covers matters 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 21. The same entity could perform both the function of a VCC project registry and a VCC registry as defined in Principle 12. Section V of these Principles only applies to a VCC registry and not to a VCC project registry. The definitions in Principle 12 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 12).

12.2 A VCC registry is defined in Principle 12(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.

12.3 A VCC registry is defined in Principle 12(1) as a database recording some very minimal information, namely, the unique identifier of a VCC or a block of VCCs (see Commentary 2.14-2.16) 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 21, 39.

12.4 The definition of a VCC registry in Principle 12(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 carbon mitigation projects are recorded (see Introduction paragraph 21) 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 39). A registry account holder can authorise the registry to release information about that account to any person, such as a prospective purchaser of VCCs.

12.5 A VCC registry is operated by a legal person called the 'registry operator' (see Principle 12(2)). This 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 12 a legal person would have to operate the registry, that is, to exercise [ultimate] control over the registry and the information recorded therein.]

12.6 Principle 12(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 person who has entered into a registry account agreement is called a 'registry accountholder' (see Principle 12(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 13(1) 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 13(1).

12.7 In relation to a VCC credited to a registry accountholder's account, that registry accountholder is called a 'registered holder' (Principle 12(6)). 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)), with the exception of the very first registered holder who may have a proprietary right in the VCC under Principle 5(2). If the first registered holder is maintaining that VCC for a client, that client will have a proprietary right in the VCC under Principle 5(2) and the first registered holder will be a custodian under Principle 14. For further explanation, see Commentary 5.4.

12.8 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 15(2)), that is, the carbon trader is the registered accountholder, and the clients' entitlements are recorded in 'sub-accounts'. If there is a custody agreement as defined in paragraph 14(6) between the carbon trader and its clients, then the carbon trader will be a custodian for the clients, and Principles 14 to 17 would apply. As explained in commentary 15.3 and 15.4, 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'.

Principle 13

VCC Registry

- (1) In relation to a VCC credited to a registered holder's account, a registry operator owes the following private law duties to the registered holder that cannot be excluded by agreement, except as provided in paragraphs (a) to (d) below:**
- (a) An obligation to comply with the rules of the registry;**
 - (b) An obligation to 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;**
 - (c) An obligation to 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 cancellation of the VCC.**
 - (d) An obligation to comply with any instruction given by a registered holder or a user authorised by the registered holder 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) An instruction mentioned in paragraph (d) includes the following:**
 - (i) An instruction to move the credited VCC to the account of another person by debiting it from the account of the registered holder and crediting it to the account of that other person;**
 - (ii) An instruction to cancel the credited VCC for retirement;**
 - (iii) An instruction to move a VCC from an account in the VCC registry in which it is recorded to an account in another VCC registry provided that the VCC continues to be governed by the same rules of the same CB that governed that VCC from the time of its creation.**
- (2) (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.**
- (3) Subject to subparagraph (2)(b) and 2(c), a VCC registered in a VCC registry is not available for the satisfaction of claims of creditors of the registry operator.**

- (4) Subject to subparagraph 2(b) and 2(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.
- (5) (a) A registry operator must comply with any instruction that is valid according to [the rules of the relevant VCC registry] [the rules of the relevant CB] to
- (b) create a VCC by crediting an account with VCC in accordance with Principle 5;
- (c) move a VCC from an account in the VCC registry in which it is recorded to an account in another VCC registry provided that the VCC continues to be governed by the same rules of the same CB that governed that VCC from the the time of its creation.
- (b) (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 rules of the same CB that governed that VCC from the time of its creation, that VCC continues to exist.
- (b) 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 does not continue to be governed by the same rules of the same CB that governed that VCC from the time of its creation,
- (i) that VCC ceases to exist at the time at which it is moved;
- (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(1).
- (7) (a) A registry operator must comply with any instruction from [or authorised by] [a CB in accordance with the rules of the relevant CCP], [a court, or a regulatory body determined by other law] to:
- (i) cancel a VCC for reversal in accordance with Principle 9;
- (ii) cancel a VCC for revocation in accordance with Principle 10.
- (b) A registry operator must not comply with any instruction to do either of the acts set out in subparagraphs (a)(i) and (a)(ii) that does not fall within sub-paragraph (7)(a).
- (8) A registry operator must
- (a) record the cancellation of a VCC;
- (b) not permit any movement by debiting and crediting or cancellation of a cancelled VCC.

Commentary

13.1 The obligations set out in Principle 13(1) are private law obligations arising out of the registry account agreement. This means that they are owed to the registry accountholder, and the usual remedies apply if they are breached. They are the minimum obligations that a registry must owe to a registered holder for it to be a VCC registry within the Principles. They are basic duties, and a State

should not permit them to be excluded by the terms of the registry account agreement (see, however, Principle 13(1)(d)(ii) and Commentary 13.6-13.7). 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 holder of each of those VCCs.

13.2 The duties set out in Principle 13(1) 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 13(1), 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.

13.3 These Principles effectively assume there will always be a VCC registry and a registry operator willing and able to record the creation, transfer and cancellation (upon reversal, revocation or retirement) of VCCs. If a registry operator decides to stop operating or becomes insolvent, and is not replaced by another registry operator, the relevant VCC registry would cease to exist. Similarly, if the VCC registry records are destroyed by a cyberattack, a fire or other event and cannot be reconstituted, the VCC registry would effectively cease to exist. In these extreme cases, depending on the exact situation, the VCCs themselves [could/would] cease to exist. This is because the registration of a VCC in a VCC registry (by being credited to a registry account) is key to enabling it to have the attributes that make it possible for a VCC to be the subject of proprietary rights. [Under these Principles, a VCC that is not registered is not a VCC since the definition of VCC in Principle 2(1) will not be met. Moreover, the attributes that make it possible for a VCC to be the subject of proprietary rights (see Principle 3(2)) would not exist. It is the registration that means that a VCC is individuated, and it is the fact that it is credited to a registry account that means that it can be controlled, that it is rivalrous and (because it can be debited from one account and credited to another) that it can be transferred (even though not every movement between accounts will necessarily result in a transfer as defined in Principle 2(14) see Commentary 2.24-2.28). These are the attributes mentioned above and in Commentary 3.2.] Even if the record could be later reconstituted, in the absence of a functioning VCC registry or registry operator, as a practical matter VCC holders will be unable to transfer or to retire their VCCs.

13.4 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.

13.5 The risk discussed in paragraph 13.3 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, and such a duty is provided for in Principle 13(1)(c) (see commentary 13.9 below). [Moreover, if the registry operator were to cease performing the duties set out in these Principles or in the registry account agreement, affected VCC holders might have a claim for damages, providing the registry operator with an incentive to ensure an orderly succession process.]

13.6 The following paragraphs relate to the private law duties owed by the registry operator to the registered holder in relation to the VCC or VCCs credited to its account.

13.7 The duty in Principle 13(1)(a) is to comply with the registry rules. The rules are likely to include many more duties than those set out in Principle 13(1), and these are likely to be of a high degree of specificity. As mentioned above, the duties set out in Principle 13(1) are minimum obligations.

13.8 The duty in Principle 13(1)(b), to allocate a unique identifier to the VCC (or to the block of VCCs containing that VCC, see Commentary 2.15) 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 12.3). A VCC, as defined in Principle 2(1) and created as set out in Principle 5, represents a particular mitigation achievement.

13.9 The duty set out in Principle 13(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. [While the duty is in general terms in Principle 13(1)(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.]

13.10 The duty set out in Principle 13(1)(d) is to comply with the instructions of a registered holder or a user authorised by them to give instructions. These instructions, as set out in Principle 13(1)(e) include an instruction to move the VCC into another account (which 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)). The instructions also include an instruction to cancel the VCC for retirement (see Principle 11). They also include an instruction to move a VCC to an account in another registry in certain circumstances. This instruction is discussed in commentary 13.19 to 13.20.

13.11 However, the duty in Principle 13(1)(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 13(1)(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 that the registry operator would not move the VCC from the registry accountholder's account, to which the registry accountholder consented. In that situation, the registry operator could refuse to carry out an instruction to move the VCC to another account.

13.12 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.

13.13 The account agreement may include many other duties, and it is open to a State to make any of those non-excludable by agreement. One example 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 12.4. 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.

13.14 Principle 13(2)(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 13(3) and 13(4)). 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 13(2)(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 may carry 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.

13.15 The other respect in which Principle 13(2)(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 13(2)(b)). 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.

13.16 Principle 13(3) and 13(4) 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 13(3) applies where the registry operator has not entered into an insolvency-related proceeding (defined in Principle 2(19)). Here, a creditor could seek to enforce a claim through enforcement procedures available under the applicable other law, but Principle 13(3) makes it clear that it cannot do so. This result parallels the substance of Principle 13(4), 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 registered accountholders and not the registry operator, who merely effects the registration of information about the VCCs.

13.17 There are two exceptions to Principle 13(3) and 13(4). These relate to the situations set out in Principle 13(2)(b) (discussed in Commentary 13.12) and Principle 13(2)(c) (discussed in Commentary 13.13). 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.

13.18 Principles 13(5) and (6) address the obligations of a registry operator to comply with instructions given by persons other than the registered holder (the obligations of the registry operator to comply with the instructions of the registered holder are set out in Principle 13(1)(d)). Principle 13(5) addresses two situations where the registry rules [or the rules of the relevant CB] can provide who is entitled to give the registry valid instructions. It provides that a registry operator

must comply with such instructions. The first type of instruction (Principle 13(5)(a)) is an instruction to create a VCC by crediting it to an account (see Principle 5). 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 12(6)) since at that time the VCC has not yet been created.

13.19 The second type of instruction (Principle 13(5)(b)) is one that a registered holder can also give (see Principle 13(2)(e)(iii)). It is an instruction to a registry operator to move a VCC from an account in the VCC registry operated by that registry operator (registry 1) to an account in another registry (registry 2) but is limited to a particular situation. This is the situation where the VCC continues to be governed by the same rules of the same CB that governed the VCC when it was created. In that situation, the VCC continues to exist (Principle 13(6)(a)), despite being credited to an account in registry 2, and this would be the case even if registry 2 were operated by a different registry operator. It would also be the case if it had a new identification number, since it is still identified by a unique identifier, although, 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. This instruction might be given, for example, if a registered holder wanted to change registry, or if registry 1 was being wound down. The VCC, though in an account in a different registry, is still governed by the same governance structure that has governed it since creation, and there will be no need for a new verification statement.

13.20 In contrast, if the rules and the CB governing the VCC on creation no longer apply to the moved VCC ('the original VCC'), that VCC ceases to exist (Principle 13(6)(b)). The VCC credited to the account in registry 2 will be a new VCC if it meets the definition of a VCC in Principle 2(1), even though it represents the same mitigation achievement as the original VCC. The new VCC will need to be governed by a new governance structure, involving a new CB and a new set of rules. Therefore, the relevant mitigation achievement will need to be verified by a different VVB producing a new verification statement, and that 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 registry 2. The crediting of the new VCC to the account in registry 2 will be the moment at which the new VCC is created (see Principle 5), and references to the time of creation in Principle 9 (reversal) and Principle 10 (revocation) will henceforth be to that moment of creation and not to the moment of creation of the original VCC. Whether a registry operator owes a duty to comply with an instruction to move a VCC into an account in another registry that has the effect set out in this paragraph is a matter for the registry account agreement (between the registry operator and the registry account holder) and/or the registry rules and is not addressed in these Principles but is governed by applicable law.

13.21 Principle 13(7) addresses situations where the registry operator must comply with instructions from (or authorised by) certain specified bodies. The instructions in question are those to cancel a VCC for reversal or to cancel a VCC for revocation. While the registry operator must comply with such instructions, it must not cancel a VCC for reversal or revocation on anyone else's instruction. This is because Principle 9(2) and Principle 10(2) set out an exclusive list of who can cancel a VCC for reversal or revocation.

13.22 Principle 13(7) sets out one of the main practical consequences for the VCC registry of a VCC being cancelled for reversal, revocation or retirement. These mirror Principle 8(3)(a) and 8(3)(c). The registry must record the cancellation of a VCC (see Principle 8(3)(a)) and must not move or cancel such a VCC.

13.23 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 13 is a matter for the applicable law.

SECTION VI: CUSTODY

Principle 14

Custody

- (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 is a registered holder of a VCC and 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 15(4)].**
- (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:**
 - (i) **maintain the VCC for the client; and**
 - (ii) **instruct the registry operator or, in the case of sub-custody, the intermediary's own custodian, to cancel the VCC for retirement if instructed by the client to do so.**

Commentary

14.1 The purpose of Principle 14 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' in the ordinary course of business (for a definition of 'maintains' see Principle 14(5) and Commentary 14.5). 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.

14.2 Principle 14(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 14(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 14(6) (see also Commentary 14.6).

14.3 Principle 14(2) to (4) defines the important parties in relation to custody. To be a 'custodian' an intermediary must be the registered holder of the relevant VCC ('registered holder' is defined in Principle 12(6) as a registry accountholder to whose registry account a VCC is credited). It also 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 14.4).

14.4 Sub-custody is where the registered holder of the VCC (the sub-custodian, who is 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. Principle 14(4) defines a sub-custodian.

14.5 As set out in Principle 14(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.

14.6 Principle 14(6) defines a custody agreement relating to a VCC (Principle 14(6)(a)) and, therefore, custody of that VCC. Sub-paragraph (c) sets out the core duties of a custodian (see also Principle 15(1)). These duties are to maintain the VCC for the client (see Commentary 14.5) and to instruct the registry operator to retire the VCC if the client instructs the intermediary to do so. 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 15 paragraph (2) would not apply, since it is expressly limited to custodians acting in the ordinary course of business.

Principle 15

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 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 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 other law or by an agreement with the client, under certain circumstances, to comply with the instruction.**
- (2) Unless prohibited by the custody agreement 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 15(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

15.1 Principle 15(2) sets out basic 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. 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(20)). As provided by Principle 15(1), a State should not permit these basic contractual duties to be excluded by the terms of the custody agreement. The language of Principle 15(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.

15.2 Principle 15(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 17(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.

15.3 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.

15.4 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.

15.5 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.

15.6 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.

15.7 The fourth safeguarding duty is the duty to separate the VCCs maintained for clients from the VCCs maintained for its own account. For the result of Principle 17(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 15(3)(a)). Alternatively, it could maintain house assets and client assets in different accounts with a sub-custodian. The legal effect of this separation depends on the applicable other law. Rather than maintaining client assets of the same description as an undivided pool, 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). 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.

15.8 The duty in Principle 15(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(20)). 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.

15.9 [There are many reasons why a custodian might want a right of use, including that it wished to use VCCs it maintained for clients as collateral for its own obligations to third parties, or it wished 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 15(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.]

15.10 The duty in Principle 15(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, or any agreement made between the custodian and any third party to which the client is a party or has consented. 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 15(5)). Moreover, other law, 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.

15.11 Principle 15(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 17(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 carbon 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.

15.12 The ability of a custodian to maintain VCCs for several clients as an undivided pool under the Principles is qualified in Principle 15(2) by being subject to other law (such as the regulatory law or other private law of the relevant State) 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.

15.13 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.

15.14 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 15.7. Where the custodian is not allowed (by the custody agreement 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 15(2) also applies to a sub-custodian, whose clients are custodians.

15.15 Principle 15(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 14(4) and (5) and Commentary 14.4 and 14.5). The agreement will only be a custody agreement if the conditions in Principle 14(6) are met, including that the custodian is under a duty to maintain the VCC and to instruct the registry to retire it if so instructed by the client. 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 15(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.

15.16 Principle 15(5) 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.

[Commentary may be updated with any relevant examples provided by the Working Group]

Principle 16

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

16.1 Principle 16 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.

16.2 Principle 16 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 16 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.

16.3 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.

16.4 It is important to understand the interplay between Principle 16, 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 16. 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.

16.5 Principle 16 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 16 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 16(2)

16.6 Paragraph (2) defines the standard of conduct the client must meet to benefit from the protection of Principle 16. 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 16 and Principle 7(4)(c).

16.7 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.

16.8 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.

16.9 **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.

16.10 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 17***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 moved to a registry account of that client or otherwise made accessible to that client, including through moving it to the registry account of 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

17.1 Principle 17(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 17(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.

17.2 Principle 17(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 17(2)(a), the 'custodian' could in fact be a sub-custodian and the 'client' could be a custodian. This situation is addressed by Principle 17(2)(b) which sets out the consequences where a VCC is held through a sub-custodian (see Principle 15(4)). As explained in Commentary 14.5, 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.

17.3 Principle 17(3) to 17(7) gives guidance as to suitable rules which should (or, in the case of Principle 17(6), 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 15(5)). The effect of this on the actions taken by an insolvency representative would be a matter of other law.

17.4 Principle 17(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 14(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.

17.5 Principles 17(4) to 17(6) apply where VCCs 'of the same description' (see Commentary 15.5) are maintained by a custodian for its clients as an undivided pool (see Principle 15(2) and Commentary 15.8). Undivided pools of VCCs 'of the same description' are explained in Commentary 15.5. 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. Principles 17(4) to 17(6) deal with the situation where there is a shortfall of VCCs, or rights against the sub-custodian, of a particular description. Principle 17(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.

17.6 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, whether these VCCs are

registered in the custodian's 'house' registry account or whether the custodian uses a sub-custodian (Principle 17(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 17(5). For this reason, Principle 17(5) is in square brackets.

17.7 Under Principle 17(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 17(5), then the word 'remaining', which is in square brackets in Principle 17(6), applies. Otherwise, that word is not required.

17.8 Principle 17(7) sets out the consequences of the insolvency of a sub-custodian where a VCC is maintained through that sub-custodian (see Principle 17(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 VII: SECURED TRANSACTIONS

Principle 18

Secured transactions: general

- (1) A VCC can be the subject of security rights.**
- (2) Subject to Principles 19, 20 and 21, other law governs the creation, making effective against third parties, and priority of a security right in a VCC.**

Commentary

18.1 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.

18.2 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.

18.3 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.

18.4 Principle 18(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.

18.5 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 20 and 21.

18.6 Principle 18(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 19, 20, 21, and 22(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 19

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 upon the secured creditor becoming the registered holder of the VCC.

Commentary

19.1 Principle 19 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 account and when it is credited to a custodian's account that maintains the VCC for the secured creditor. 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.

19.2 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 19 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 render a security interest effective against third parties, that option too remains available. Principle 19 establishes an asset-specific alternative that aligns with the particular nature of VCCs.

19.3 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 19 builds on these elements, integrating the perfection of security rights into the registry-based framework, thereby creating a cohesive legal regime.

19.4 When a secured creditor becomes the registered holder of a VCC pursuant to Principle 19, 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.

19.5 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.

19.6 Principle 19 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.

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Principle 20

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 to follow instructions from the secured creditor with respect to the VCC, without further consent from the grantor.**

Commentary

20.1 Principle 20 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 19, this Principle constitutes an asset-specific rule that partially displaces the general deference to other law in Principle 3(4)(g).

20.2 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 20 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.

20.3 As defined in the Principle, a control agreement is a tripartite arrangement. The parties involved will be either: (i) the grantor, the custodian, and the secured creditor, where the VCC is held in custody (Principle 20(2)(a)); or (ii) the grantor, the registry operator, and the secured creditor, where the grantor is the registered holder (Principle 20(2)(b)). In both configurations, the essential element is the same: the third party (the custodian or registry operator) agrees to follow the secured creditor’s instructions concerning the VCC without requiring additional clearance from the grantor.

20.4 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 to act only on the secured creditor’s instructions, 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 authorization. The effect of this arrangement is to prevent the grantor from creating competing rights that could defeat the secured creditor's interest.

20.5 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.

Principle 21

Priority of security rights in VCCs

A security right in a VCC that is made effective against third parties in accordance with Principles 19 or 20 has priority over a security right in the VCC that is made effective against third parties by another method.

Commentary

21.1 Principle 21 addresses priority conflicts between secured creditors that have made their security rights effective against third parties through the methods specified in Principles 19 or 20 (crediting to a securities account or control agreement), while another secured creditor has used alternative methods recognized by other applicable law (such as registration). The principle establishes a non-temporal priority rule: the secured creditor using the Principle 19 or Principle 20 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.

21.2 Although Principle 21 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.

21.3 Second, a secured creditor that perfects through the methods in Principles 19 or 20 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.

21.4 Third, the rule in Principle 21 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.

21.5 While Principle 21 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 19 (credit to account) and Principle 20 (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. 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 19 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, 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 19 and 20 because the architecture of the Principles prevents such conflicts from arising.

21.6 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.

21.7 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 19 and 20. 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 22

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 20, 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 20, the secured creditor is entitled to enforce its security right only pursuant to an order of a court or other public authority.**

Commentary

22.1 Principle 22 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.

22.2 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.

22.3 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 19 and 20, 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 22(2) and 22(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.

22.4 Principle 22(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 20. 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 22(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.

22.5 Principle 22(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 13, 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 22(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 22(2), reflecting the same policy objective of protecting intermediaries from parties outside their contractual relationships.

22.6 For the avoidance of doubt, Principles 22(2)-(3) do not apply where a secured creditor has perfected their security right pursuant to Principle 19 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 22(2)-(3), which address the situation in which a custodian or registry operator receive 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 19 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 VIII: PROCEDURAL LAW INCLUDING ENFORCEMENT

Principle 23

Procedural law including enforcement

- (1) Unless otherwise provided for in these Principles, other law applies in respect of procedural matters, including enforcement, relating to VCCs.**
- (2) A person enforcing a [proprietary claim] to a VCC credited to an account in a VCC registry is entitled to instruct that VCC registry to move that VCC from the account of the registered holder to the account of another accountholder only pursuant to an order of a court or other public authority.**

Commentary

23.1 Principle 23(1) makes it clear that the ordinary procedural law of a State, will apply to (i) any court proceedings concerning non-enforcement matters involving VCCs, (ii) any procedures for the enforcement of court orders involving VCCs, or (iii) execution by way of authority with respect to VCCs. The first category includes proceedings which are not enforcement proceedings: such proceedings would include priority contests. Category (ii) is self-explanatory. What is meant by category (iii) is explained in the rest of this paragraph. Execution is the process through which a creditor can obtain satisfaction of its claim against an obligor, by reaching and applying the value of an asset of the obligor or by a public authority obtaining rights in, or control over, such an asset. Depending on the jurisdiction (and the situation), this process can be triggered by various means including a court judgment or court order, an enforceable arbitral award, an out-of-court settlement which is given effect by law other than the law of contract or by an authentic document such as a document issued by a notary or other public authority, or another enforceable instrument as defined by law. The process is carried out by a public authority or a private actor under the supervision of a public authority.

23.2 However, depending on the content of the procedural law of a particular State, some adaptations either to the law or the way the law operates in practice may be advisable in order to take account of the distinctive features of VCCs. Commentary [xx] sets out some examples of features, or combinations of features, which might make adaptations advisable.

23.2 Principle 23(2) addresses a situation where a person (X) has a proprietary claim in relation to a VCC, that is, claims to have a proprietary right in that VCC that has priority over any right of the registered account holder (Y). An example of this situation is where the transfer of the VCC to the registered accountholder was unauthorised, and the registered accountholder was not an innocent acquirer. In this situation, Principle 23(2) makes it clear that X is not entitled to instruct the VCC registry that maintains the account to which the VCC is credited to move that VCC into another account (for example, X's own account) without a court order or an order from another public authority.

23.3 Principle 23(2) makes clear what is implicit in the rest of the principles. First, without specific agreement, a registry operator is obliged to comply only with instructions to move a VCC from a registered holder or a user authorised by the registered holder (Principle 13(1)(d)). However, the contractual position will always be subject to an order from a court or other public authority. Second, in the same way as a custodian of a VCC is unlikely to have a relationship with a secured creditor (in the absence of registration of the VCC in the account of a secured creditor or a control agreement) and so the custodian needs the protection of being able to refuse to comply with an instruction to enforce the security right (see Principle 22(2)), the registry is unlikely to have a relationship with X

(the person with a claim to a proprietary right) and will not be in a position to judge whether that claim is well made, and whether the proprietary right has priority over any right of the registered holder. Therefore Principle 23(2) protects the registry operator and enables it to refuse to comply with any instruction to move the VCC to another account.

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SECTION IX: INSOLVENCY

Principle 24

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

24.1 Principle 24 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 24 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.]

24.2 Apart from situations falling within the innocent acquisition rule in Principle 16 and the rule in Principles 19 and 20 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(20))). Principle 24(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

24.3 The consequences of the operation of Principle 24 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 24 primarily concerns situations (1) and (2), which are considered in Commentary 24.4 to 24.8, which,

by way of example, illustrate the operation of Principle 24 in the context of insolvency proceedings resulting in a distribution to creditors. Situation (3) (insolvency of a custodian) is considered specifically in Principle 17 and the commentary to that Principle. Insolvency of a sub-custodian is covered by Principle 17(7).

Situation (1)

24.4 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 12.7). 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 24(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, sell them, 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 sell it or retire it. Retrieving the VCC is likely to entail becoming entitled to instruct the VCC registry to act in relation to the VCC (see Principle 13(1)(d) and (e)). 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 13(1)(d)).

24.5 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.

24.6 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 19) or may have entered into a control agreement in respect of the VCC (Principle 20), or may have made her security right effective by other methods available under the applicable law (see Principle 18(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 22).

24.7 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 22).

Situation (2)

24.8 There are also a number of variations of situation (2). In the first variation, a registered holder owns a VCC (see Commentary 12.7) 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 24(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 24.12). 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 22(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 (see Commentary 11), but whether it can do so will depend on the applicable insolvency law.

Principle 24(2)

24.9 While Principle 24 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 24(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(20)), including its tax law, insolvency law, general private law, and its procedural law. Principle 24(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 24(1).

24.10 The first example, set out in Principle 24(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.

24.11 The second example, set out in Principle 24(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.

24.12 The third example, set out in Principle 24(2)(c), clarifies that, if the insolvency representative has taken 'control' of the VCC as described in Commentary 24.4, Principle 24(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 24(1). Principle 24(2)(c), read in conjunction with Principle 24(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.